CUSTOMER PERCEPTION TOWARDS SUSTAINABLE GREEN MARKETING: AN EMPIRICAL STUDY WITH REFERENCE TO ASSAM

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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CERTIFICATE

This is to certify that the thesis entitled "Customer Perception towards Sustainable Green Marketing: An Empirical Study with Reference to Assam" written by Miss. Priyanka Mahanta has been completed under my supervision.

She has fulfilled all the required norms laid down under the Ph.D. regulation of Mizoram University. The thesis is the result of her own work and investigation. Neither the thesis as a whole nor any part was ever submitted to any University for any degree or award.

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DECLARATION

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December, 2023

I **PRIYANKA MAHANTA**, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/ Institute.

This is being submitted to the Mizoram University for the Degree of **Doctor of Philosophy in Management.**

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Introduction

1.1. Introduction

Due to the ever-increasing constraint of the resources that are required to generate products and services, societies currently are facing major challenges related to sustainable consumption and production (the twelfth SDG). According to Chen and Chai (2009) and Liu et al., (2016), the linear economy and culture of waste are to blame for resource depletion, climate change, and environmental pollution. No longer customers are final link in the manufacturing process. Contrarily, by restoring, recycling, or utilizing supplies in new production cycles within the circular economy framework, customers can play a critical part in ending the cycle (UN, 2015). Customers' perception towards marketing has changed and increased considerably across the world on environmental issues, such as global warming and carbon emissions, has now become global issues (Shirsavar & Fashkhamy, 2013) and various steps are being taken to shift towards “green” to protect the environment. In today’s world, both advertisers and buyers are highly receptive to the need for green goods and services. For the entire earth and human beings, environmental issues are still the biggest concern. The major environmental issues that have arisen so far, alongside human activities, are carbon emissions, conservation consequences and ecological imbalances (Sharma, 2011). A few of the major concerns with the field of green marketing is that no effort has been made to analyse environmental or sustainable marketing academically. In the current market, green marketing is a concept that has become increasingly relevant. This idea has allowed existing goods to be re-marketed and packaged (Bhattacharjee &Mukherjee, 2015). Green marketing emphasizes on environmentally friendly goods to fulfil customers' expectations and desires (Akhil et al., 2016).

Businesses realizes that offering goods and services that meet customers' environmental concerns will increase the probability that those customers will choose their goods or services (Kang & Hur, 2011). Companies must find ways to improve their products' environmental credentials in this new environmental era in order to build brand equity (Chen, 2010). In other words, corporations must take the initiative to adopt sustainable marketing techniques, such as green marketing (Gordon et al., 2011; Martin &Schouten, 2012). In order to highlight the issues of

global warming in the twenty-first century, green marketing has consequently developed as the new marketing philosophy accepted by customer groups wanting ecologically friendly products. Additionally, to understand how the customer behaviour is rapidly changing, it is necessary to continuously examine and investigate the current market trends.

Companies will have to significantly boost their green marketing strategies (Kotler, 2011), since it is no longer a way of making business look better in terms of marketing its products to the green customer, it's becoming a necessity for companies to be more Earth-friendly in their techniques. A range of different factors can be involved in green marketing such as creating a sustainable and environment-friendly product, using eco-friendly packaging, incorporating sustainable business models, or concentrating marketing strategies that convey the green value of a product. However, the most important part of green marketing is that they tend to get a competitive advantage for the environmentally friendly products in the market against the non-environmental friendly products, as the green brands get more attention and it has been empirically found that using auditory features can stimulate the greenness of the brand and achieve the desired market (Joshi &Kronrod, 2020). As it is generally a belief, that green marketing mostly consists on the promotion and advertising of goods with ecologically friendly attributes. Mahmoud, (2019) defines green marketing as the interchangeable application of the four marketing mix components (product, price, promotion, and distribution) till the sale of goods and services that offer better environmental benefits like reduced waste, increased energy efficiency, and/or low toxic emissions.

1.2. Operational Definitions:

Green Marketing:

Paco & Raposo, (2010) defined green marketing as "the holistic management process responsible for identifying, anticipating, and satisfying the desires of customers and society as a whole in a profitable and environmentally friendly way."

In other words, it is the procedure for planning, executing, and overseeing the production, estimating, costing, advertising, and distribution of products. It focuses

on meeting specific criteria, such as customer needs, organisational goals, and integration with ecosystems (Fuller, 1999).

According to American Marketing Association "green marketing is the marketing of products that are considered to be environmentally safe".

Greenwashing:

According to Delmas and Colgan (2018), "greenwashing" is the technique of deceiving customers about a company's environmental policies or the environmental advantages of a good or service.

The technique of deceiving customers about an organization's environmental policies (known as "firm-level greenwashing") or the advantages an item or service has for the environment (known as "product-level greenwashing") is referred to as "greenwashing." (Delmas & Burbano, 2011).

Green purchase intention:

Green purchase intention, according to Fandos and Flavian (2006), is a customer behaviour planned ahead of time to make future purchases. Prior to making actual purchases, shoppers base their decisions on their purchasing intentions (Pandey & Srivastava, 2016).

Environmental Concern:

Environmental awareness has emerged as a key indicator for analysing ecological behaviour (Joshi, 2017, Landry et al., 2018). In most cases, it has an indirect influence on customer behaviour through elements including views, arbitrary norms, and the impression of behavioural control (Zhang & Luo, 2021). Using the Behavioural Reasoning Theory (BRT), Chen et al., (2021) divided environmental worry into three categories: egoistic concern, altruistic concern, and biospheric concern.

Customer Perception:

Customer perception is defined as “the process via which a person learns about their surroundings and applies that knowledge to meet their wants, demands, and attitudes.”(Crane & Klarke, 1994; Harrell& G.L. Frazier, 1998).

1.3. An overview of green marketing

The concept of green marketing was first introduced in the late 1980s, despite some attention being given to it in the 1970s. It started in Europe in the early 1980s when it was recognized that some manufactured goods were bad for the environment.Since then, there have been three phases of green marketing the first phase is ecological marketing, the second phase is known as environmental marketing and the last phase is known as sustainable marketing (Mishra& Sharma, 2014; Zampese et al., 2016; Lazar,2017; Papadas et al., 2017).

First Phase (Ecological Marketing): During the first phase, it mainly focused towards the harmful chemical industries releasing harmful and toxic waste to the environment. As all the marketing activities should be directed towards healing the environment, although it was not much successful but it received awareness from the government regarding safety of the environment. Green marketing has been acknowledged by the government as "a form of response to environmental activism"(Zampeseet al., 2016).

Second Phase (Environmental Marketing): During the second phase in 1980’s, the marketers concentrated on renewable technologies for creative product design, emissions reduction and waste reduction (Lazar, 2017). Especially in comparison to the ecological process, the environmental period was not confined to resource use, but captured environmental threats, such as habitat degradation, and species extinction. This phase does cover chemical toxic industries and it also included electronic, tourism industry, cloth industry, etc. During this period, most businesses faced challenges in ensuring the greenery and characteristics of goods, customers showed mistrust for green initiatives. The ideology of clean technology arose because of the incidence of adverse environmental disasters.

Third Phase (Sustainable Marketing): During the third phase in 2000's, it mainly focused on having an impact on the natural environment. The stage of sustainability introduces a special manufacturing and consumption necessity: to assure that the existing material quality is met and that the life of the future is not detrimental (Peattie, 2001). Green marketing receives planning ahead in many businesses at a sustainable stage. The aim of sustainable marketing poses new challenges for companies in different industries: direction towards the future, fairness, and focus on needs (Katrandjiev, 2016).

1.3.1. Green marketing mix

There are 4P's for the green marketing mix. These 4 P's are integrated in such a way to satisfy the need of the customers as well as to provide environmentally friendly products to the customers. The development and advertising of items that are intended to be ecologically friendly is known as "green marketing." It is a distinct type of marketing where products and services are advertised based on how good they are for the environment. The term "green" is used to describe the items whose manufacturing does not harm the environment in any way, and whose ingredients and packaging are environmentally friendly. Green marketing encompasses more than just advertising; it also includes the creation of eco-friendly products, the use of sustainable business practices, the use of eco-friendly packaging, and the development of marketing campaigns that highlight the products' environmental benefits. However, it is a challenge for the marketers as it depends on how creatively they can use the 4 P's and every company has their own marketing mix.

Green Product - In recent years, marketers have used terms like "green products," "organic," "ecologically responsible," and "ecological" to inform and entice customers (Gosavi, 2013). Green products serve to promote sustainable development and lessen pollution by not causing harm to the environment. Green products safeguard the environment and address environmental issues while conserving energy or resources, limiting the use of harmful items, reducing emissions, and eliminating pollutants (Ottman et al., 2006). According to Ghodeswar (2015), a green product is one that is manufactured with non-toxic materials and

ecologically friendly practices and has received certification from a reputable body. The product serves as the foundation of the green marketing mix and is the most significant component of an overall green marketing strategy. But keeping in mind that every component of the product—the materials utilised, the manufacturing process, the packaging, etc. are considered a part of a green product (Fan & Zeng, 2011). A green product is one that performs the same tasks as a comparable conventional product but does less environmental harm over the course of its life cycle.

Green Price- Price is the value that the customer pays for the product. Green pricing thus relates to pricing of green products i.e. environmentally friendly and there is an increase in the value of the product just because of its green factor. Environmentally sustainable goods, moreover, are less costly when product life cycle costs are considered. All of these details should be taken into account by green marketers before raising prices. For customers to be encouraged to buy green products, the price must be fair. Demand for any green product is influenced by its price (Xu et al., 2017). The book by Ottman (1997) makes the case that buyers won't pay extra for a product that is designated as "green". As a result, marketers need to give the product's pricing top attention (Khan, 2012). As price is the only factor that can completely balance revenue and profit as all other P's in green marketing leads to expenses. As per Hashem and Al-Rifai (2011), "green pricing" is a pricing strategy that takes into consideration a business's environmental practises, as required by regulations, company guidelines, or initiatives in this domain. Green pricing takes into account the needs of the people, the environment, and business in a way that promotes efficient production while safeguarding the health of employees and communities. Among other things, the value may be raised by changing its emergence, utility, and customization (Shil, 2012).

Green Place (distribution) - In order to reduce transportation emissions and thus the carbon footprint, green places manage logistics more efficiently (Shil, 2012). It basically refers to have a warehouse or logistic in nearby so that transportation is reduced to limit the emission of carbon. Place represents the location where a product may be purchased. This can include both a physical and an online shop.

Material should be sent to the relevant distributors, which should be directly and conveniently situated in an environmentally safe area with no emissions. The option as to where and when to enable a commodity available by a business, would have considerable effect on the customers. Less customers may go out of their way to buy green goods (Sharma, 2011). The method of distributing green is quite delicate. Customers need to be guaranteed that the item is "ecologically nature". When distributing green products, a high level of observance is necessary because the green environment is constantly controlled (Yazdanifard & Mercy, 2011).

Green Promotion- Designing publicity tools such as advertisements, brochures, posters, journal articles, websites, brand management, product promotion, social media marketing, in-person promotions, visuals, and demonstrations while taking into account the needs of people, the environment, and the benefits is all part of green promotion (Shil, 2012). This refers to giving precise product details in a way that protects buyers' and customers' interests (Hashem & Al-Rifai, 2011). The primary goal of green marketing is to draw in customers by raising awareness of the benefits of the products. Encouraging clients to learn about firms' environmental commitments and initiatives is known as green marketing. This component of the green marketing mix is made up of a number of strategies, such as on-site promotions, direct marketing, sales promotions, public relations, and paid advertising. Providing clients who are involved in a business's activities with proper environmental information is known as "green promotion."

1.3.2. Factors affecting green marketing

1. Pro-Environmental customer behaviour: According to Neaman et al., (2018) and Otto etal., (2022), pro-environmental behaviour is viewed as a subtype of prosocial activity that is motivated by a desire to protect the environment. In particular, it consists of actions meant to lessen or undo the harm a person has caused to the environment (Kollmuss & Agyeman, 2002; Siegel et al., 2018). Pro-environmental behaviour is impacted by a number of interrelated internal and environmental factors (Siegel et al., 2018; Kollmuss& Agyeman, 2002), which together help to shape our inner drives. These consequently serve as motivators for

the actualization of conduct. Thus, the significance of individual variances is emphasized, although it is unclear what causes the predisposition for pro-environmental behaviour.

2. **Environmental knowledge**: According to Frick et al., (2004); Kaiser and Fuhrer (2003), environmental knowledge is described as knowledge that blends understanding of the functioning and issues with ecosystems, civic behaviour options, and the pursuit of a higher environmental benefit. The notion of environmental knowledge, according to Mostafa, (2007), encompasses knowledge about the environment, the causes of its impacts, the insights as a whole, and a shared commitment to sustainability. The idea should also cover everything from being aware of environmental issues to finding solutions for them (Kollmuss& Agyeman, 2002; Bamberg & Möser, 2007; Zsóka et al., 2013).

3. **Demographic factors**: It is clear from a number of earlier research that demographic factors significantly influence customers' pro-environmental/green shopping behaviour. Environmentally concerned customers are often caucasian, female, professional, and younger (Harris et al., 2001). According to Kollmuss and Agyeman (2002), demographic factors are among the most significant factors influencing pro-environmental behaviour. Moreover, men and women have significantly different levels of awareness of green products(Shukla et al., 2019).

4. **Environmental concern and awareness:** Environmental concern is described as the degree to which a person understands and cares about environmental problems, supports attempts to address them, and expresses worry for them (Lin & Niu, 2018). Customers that care about the environment are very motivated and keen to buy ecologically friendly goods (Verma et al., 2019). Based on previous studies (Mainieri et al., 1997; Bamberg, 2003; Mohd, 2016), green consumption intentions and attitudes are positively impacted by environmental concerns. Ahmed et al., (2021) claims that environmental concerns have a positive impact on young customers' inclinations to purchase organic food. The findings showed that environmental concern enhances the association between attitudes and the propensity of young customers to purchase organic food. Furthermore Beckford et al., (2010)

and Cornelissen et al., (2008) found that environmental views had a major impact on customer buying behaviour related to environmental concerns and going green.

5. **Greenwashing**: Making false or deceptive claims about a product's or practice's environmental advantages is known as "greenwashing". Nguyen et al., (2019) and Sun & Shi (2022) found that greenwashing has been negatively associated with the green purchase intention of the customer. According to Zhang et al., (2018), customer perceptions of greenwashing have a detrimental direct impact on customers' intention to purchase green products as well as a detrimental indirect impact through green word-of-mouth. Furthermore, green concern strengthens the unfavourable association between intentions to purchase environmentally friendly products and views of greenwashing. Tarabieh, (2021) asserts that greenwashing has a favourable impact on perceived risk and green confusion.

1.3.3. Challenges in green marketing that pave way for greenwashing:

Greenwash occurs frankly in the shadowy world of green marketing. Businesses are eager to satisfy the customer demand for green products, which compels them to violate business ethics. As a result, they start to deceive the customers into making earnings in the name of green products. Though the term "Greenwash" wasn't first used until 1986, its effects might be detected as early as the 1960s. A periodic presentation of greenwash are as follows;

1960s: Westinghouse's nuclear power unit is credited as being the first to apply greenwashing. The environmental movement was inspired by anti-nuclear activism. The loss of the ecosystem was something that people started to become aware of during that time. Companies began to support the green aspects of nature as a result of their products. Green advertisements were used in an effort to draw in the public. In 1969, more than $300 million was reportedly spent on advertising to promote eco-friendly products. It's surprising that this expense was eight times higher than the amount spent on anti-pollution research (Bruce Watson, 2016)**.**

1970s: The first Earth Day was observed at this time, in the 1970s. The corporations were urged to market themselves as being environmentally friendly. During this period, greenwashing was still going on (Torelli et al., 2020).

1980s: After the Exxon Valdez accident and the Bhopal gas tragedy, the environmental movement started to gain momentum. Following this traumatic experience, the phrase "greenwash" also spread among marketers who cheated the customer in the presence of environmentalists. Large corporations started investing on the creation of greenwash commercials. To increase their profits, they began to harm the environment heavily (Gonsalves, 2010).

1990s: At the same time as greenwash reached its peak, the entire world celebrated the twentieth anniversary of Earth Day. According to a 1991 article in the Journal of Public Policy and Marketing, customers were deceived by at least one of the 58% of commercials that claimed to be green. People had begun to express concern about environmental issues during this stage. They start making bold demands for the green products. In order to profit from these conditions, all businesses started to pose as being environmentally friendly. Greenwash, according to Dahl, (2010), is defined as "Ads and labels that promise more environmental value than they deliver. Companies use attractive and persuasive commercials to portray themselves as environmentally conscious, but in reality, they do not take any action to protect the environment. The federal trade commission established "green guidelines" in 1998, which provided a comprehensive glossary of terms used in environmental marketing. Finally, in 1999, the term "greenwashing" was first included in the Oxford english dictionary.

2000s: During this time, businesses began to compete fiercely with one another to market themselves as environmentally friendly. According to the research from USA, only 2% of products were genuinely green, as compared to 4.5%. Between 2007 and 2009, greenwashing surged by up to 79%. Additionally, 95% of products were determined to be guilty of greenwashing, and practically all products had at least one instance of this sin (Terrachoice, 2010). In the end, Greenwashing has taken a murky shape.

1.3.4. Drivers of greenwashing:

Delmas and Burbano (2011), proposed a detailed framework for it. In actuality, it was developed to aid business decision-makers. They can stop greenwash

from increasing. Additionally, a number of things that fall under the category of "Uncertain Non-Market Regulations" influence greenwash. These rules follow external market, organizational, and individual drivers impartially. The actual environmental performance of the enterprises and their assertions for environmental performance are compared on the basis of institutional theory in order to regulate and comprehend such factors. Businesses frequently take advantage of these drivers to deceive customers and make large profits. They mercilessly destroy the environment while also crushing customer trust in order to slake their appetite for profit. Because every company engages in the process of greenwashing with the aid of these drivers, the following factors are known as the cornerstone of greenwash drivers.

1.3.4.1. Non-market external drivers: regulatory and monitoring context:

In business not only the market factors however, non-market drivers invoke it to mercilessly deal with the customer.

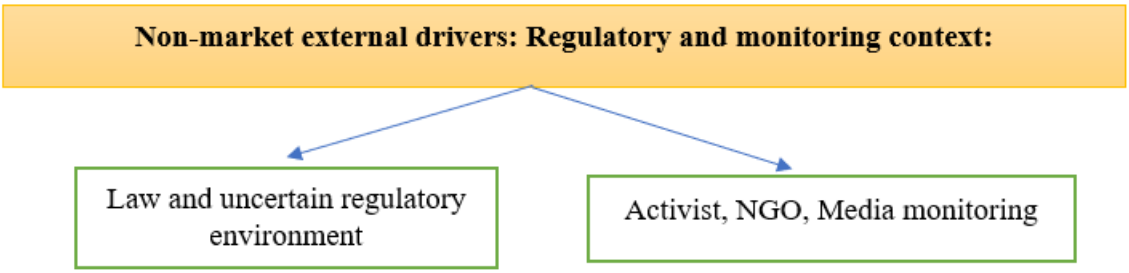

Figure 1.1: Non-Market External Drivers

i) **Law and uncertain regulatory environment**: There are several restrictions and guidelines for greenwashing. However, every company considers these laws and regulations as limited and extremely unclear due to their inefficiency. Under Section 5 of the Federal Trade Commission Act (15 USC 45), product advertisement policies are developed. Unfortunately, no company is taking the act seriously despite its existence. It occurs as a result of numerous environmental claims that fall under section 5. Additionally, some regulations explicitly indicate that companies are not required to share their environmental information. The Advertising Standards Council of India (ASCI) oversees Indian advertising, ensuring that ethical and moral

principles are upheld, and has some authority over claims of "greenwashing." While promoting fairness and equity in the marketplace, the organization tries to verify that the promotional material is respectable, precise, and safe. However, it has not yet made decisions in any cases of greenwashing. There is no specific law regarding greenwashing in India and that's the reason why the companies are free to make false statements and hamper the trust of customers, and due to this it becomes difficult for the customers to differentiate between genuine and false environmental claims leading to increasing in greenwashing (Delmas and Burbano, 2011).

ii) **Activist, NGO, Media monitoring**: Environmental activists, NGOs, and the media have total influence on the monitoring context of greenwash. They don't just publicise each case of greenwashing; they actively coordinate campaigns against it. They are essential in bringing the public out of its state of ignorance. They place a strong emphasis on the necessity for all businesses to take responsibility for conveying accurate and positive environmental claims and performances. Numerous environmental websites, such "goodguide.com," "source watch," "stop greenwash," etc., are available to make it relevant. They offer all information about all companies and have a bird's eye perspective of their databases. But unfortunately, there is no such NGO or any activist campaign towards greenwashing in India (Delmas and Burbano, 2011).

1.3.4.2. Market external drivers: Some of these market drivers put pressure on businesses to project an environmentally friendly image. However, these drivers are not as effective as is generally believed.

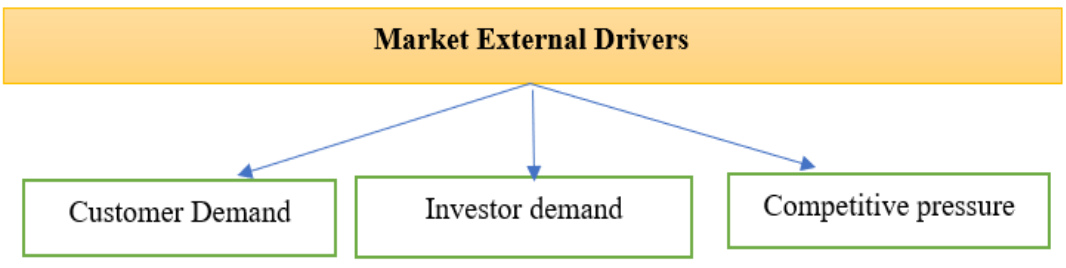

Figure 1.*2*: Market external drivers

i) **Customer and investor demand**: The primary goal of every company is to draw customers to its goods and services. Businesses are compelled to meet customer demands for green products by the public's growing preference for them. Similar to this, any investor is likely to place money in areas where customer demands are satisfied. Renowned investors' investments not only offer favorable incentives but also enhance the company's reputation. But over time, it gets more challenging for all businesses to implement all green practices. However, due to their intangible character, buyers also encounter difficulty in determining the products' green attributes. All of the aforementioned factors drive businesses to use greenwashing as a result.

ii) **Competitive pressure**: It is a prevalent misconception that a company cannot offer authentic goods unless there is no competition. In order to outwit and outperform its competitors, a company therefore communicates its strong environmental results. As a result, when a company advertises its green initiatives, its rivals advertise their superior environmental records. All businesses merely do it to keep their reputations in the market intact. A company typically presents itself as better than its competitors.

1.3.4.3. Organizational drivers : In greenwash, a company also recruits its own organizational drivers that aid in massive profit accumulation. The characteristics of the company, the way incentives are distributed, the cultural landscape, the effectiveness of intra-company communication, and organizational lethargy may all be categorized as the most significant organizational drivers. These can be characterized as:

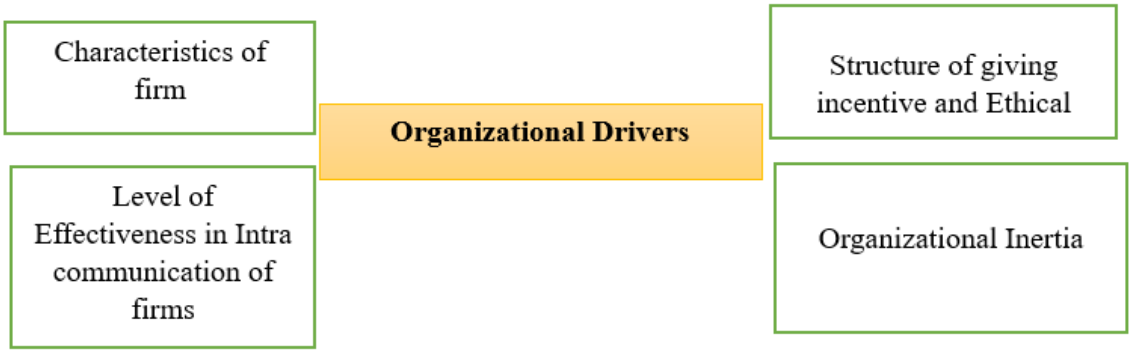

Figure 1.3: Organizational drivers

i) **Characteristics of firm**: The information such as size, life cycle, stages of product of the company provides many information and it helps to determine overall strategy with the help of cost benefit analysis. Customers may exert more pressure on customer product companies than on service providers or companies in non-customer product sectors to appear environmentally friendly. Similarly, large, publicly traded companies frequently receive attention from the SRI (Socially Responsible Investment) community; as a result, these companies probably experience higher levels of investor pressure than smaller, private companies.

ii) **Structure of giving incentive and ethical climate**: Every company embarks on its development journey because of ethical environments and incentive systems. The company's ethical behaviour will influence the ethical cultures and incentive systems. As greenwash harms the social or ethical values of people, it is regarded as unethical behaviour on the part of the company. The motivating factors for greenwashing include business interests concerned in making a quick buck. Greenwashing grows like a nuclear series when a company willfully disregards ethical principles and regulations. Additionally, it has been demonstrated that the ethical environment and incentive structure of a company can influence its employees' ethical behaviour. According to Brass et al., (1998) unethical behaviour conduct negatively affects other people and it is either against the law or ethically repugnant in society at large.

iii) **Level of effectiveness in intra communication of firms:** Inadequate exchanges of information within a company may also contribute to the accidental greenwashing of companies. If everything else is equal, greenwashing may be more prevalent in companies with inadequate interaction between marketing/PR departments and product development, production, or packaging departments. For instance, a marketing or PR department may exaggerate a product's greenness due to a breakdown of interaction with the packaging, supplier of components, or the product design department.

iv) **Organizational Inertia:** Strategic change is hampered by organisational inertia, which is the significant retention of current form and function. Larger, older companies are more likely to have organisational inertia than smaller, more recent companies (Hannan et al., 1984). Therefore, a natural lag between a manager's

declaration of a green intent and its execution, or between a CEO's commitment to greening the firm and the rest of the company's modifications to structure and procedures to actually green the company, may be explained by organisational inertia Maxwell et al., (1997).

1.3.4.4. Individual-level psychological drivers: These are the factors that impacts how decision-makers behave personally and psychologically. Decisions are made on the basis of ambiguous circumstances and incomplete information, which tends to foster the firm's propensity for greenwashing. It occurs frequently when long-term corporate interests prevent decision-makers from assessing the detrimental effects of greenwashing.

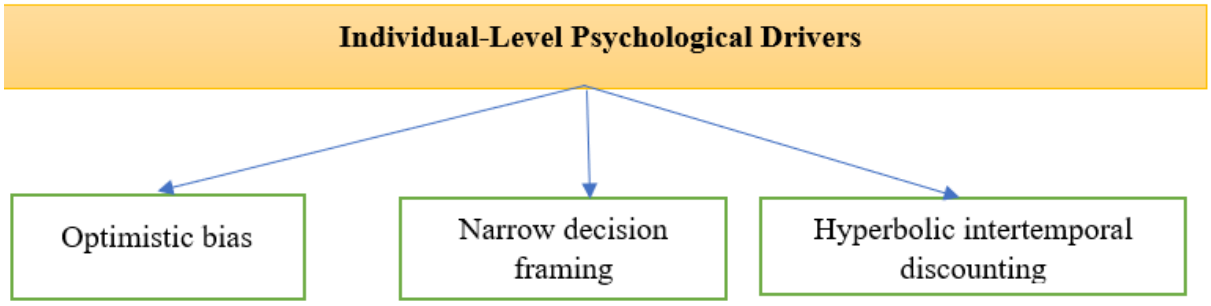

Figure 1.4: Individual-level psychological drivers

i) **Optimistic bias:** Greenwashing may also be influenced by people's propensity to exaggerate the chance of favourable outcomes and underestimate the likelihood of unfavourable outcomes. Optimistic bias develops in part because predictions of future results are frequently based on plans and success prospects rather than on historical outcomes. There are three basic types of pervasive optimistic biases: an illusion of control, an overly optimistic view of oneself, and an overly optimistic view of future events and plans (Taylor & Brown, 1998).

ii) **Narrow decision framing:** The propensity to make decisions autonomously is known as narrow decision framing, also known as narrowing bracketing (Kahneman & Lovallo, 1993). Without carefully weighing the necessary steps to accomplish this in the future, decision-makers inside a company could choose today to promote the greenness of a product or company, leading to greenwashing in the future. Or a decision-maker or company leader can prioritise the short-term benefits of

greenwashing without properly assessing the long-term potential negative consequences on reputational damage.

iii) **Hyperbolic intertemporal discounting:** Dynamic inconsistency, often known as preference reversals, is produced via hyperbolic discounting. For instance, hyperbolic customers show a disconnect between their short-term actions and long-term objectives. They won't reach their intended amount of "target savings" because short-term inclinations for immediate satisfaction hinder efforts to put patients' long-term goals into action. Given the cognitive elements that may contribute to "firm greenwashing," a manager or other business leader may choose to publicly tout the company's commitment to ethical behaviour and environmental sustainability while preparing to foot the bill for future green practice implementation. When, as it were, the future became the present, the decision-maker once more chooses to greenwash (Delmas and Burbano, 2011).

1.4. Green Initiative by different organizations to regulate green products:

The concern over safeguarding the environment has brought the public, business, and government to a level playing field where each must fulfil a certain function. The government and legislators are using their clout to lessen the risks to the environment and public health brought on by industrialization and to encourage the creation of cleaner technologies. The natural environment is, however, under a great deal of stress as a result of unplanned urbanization, fast industrialization, and shifting consumption habits in the quest for higher living standards. It is abundantly obvious that environmental regulation by pollution control organizations alone is insufficient to return the natural world to its pure form. The development of proactive and proactive roles should be coordinated with an overall environmental protection strategy.

1.4.1. Eco – Mark scheme

The moment has come for customers to take action and demand that businesses utilise clean, green technologies, dispose of unwanted goods safely, and take precautionary and mitigating measures. In an effort to raise customer awareness, the Indian government introduced the "Eco-mark" eco-labelling system in 1991 to

make it simple for customers to find environmentally friendly items. A product can be said to be environmentally friendly if it is created, used, or rid of in a way that considerably lessens the damage it would otherwise do to the environment. Customer items that satisfy both the quality standards of Indian Standards and the prescribed ecological standards are given the "Eco-mark" designation. All products with Eco-marks are treated as environmentally friendly products.

The criteria for eco-labelling were established by the Eco-mark Technical Committee of the Central Pollution Control Board (CPCB, Ministry of Environment and Forests, GOI), with the Bureau of Indian Standards (BIS) acting as the Eco-mark's implementing body. Eco-mark was to be used in tandem with the ISI mark. When a product bears the Eco-mark, it indicates that it was created, utilized, or disposed of in a way that significantly reduced any potential environmental harm.

There are currently 16 product categories listed for "Eco-mark" consideration, including soaps and detergents, paper; food items, lubricating oils, packaging materials, architectural paints and power coatings, batteries, electrical/electronic goods, food additives, wood substitutes, cosmetics, aerosol propellants, plastic products, textiles, fire-extinguisher, and leather.

The logo chosen for the Eco-mark scheme in India is an earthen pot. The common earthen pot employs a renewable material, like earth, takes less energy during production, doesn't produce toxic waste, and is environmentally friendly. Its sturdy and elegant shape symbolises the durability and delicacy that also define the eco-system. It communicates its environmental message through symbolism. Its image has the power to influence individuals and can work to raise awareness of the importance of protecting the natural world. The Eco-mark Scheme badge denotes that the product carrying it does the least amount of environmental harm(Das, 2002).

Figure 1.5:The Eco- Mark

The particular objectives of the plan are as follows:

1. To persuade merchants and manufacturers to diminish the harmful effects of their products on the environment.
2. To recognize the earnest efforts made by companies to lessen the negative environmental effects of their products.
3. To encourage customers to live more environmentally conscious lives by educating them on how to take environmental issues into account while making purchases.
4. To induce people to purchase products that have less detrimental environmental effects and ultimately to encourage sustainable resource management and to improve environmental quality.

1.4.2. ISO standards for green products:

The ISO 14040 series, which addresses the product life cycle, includes several sample applications and discusses the fundamental ideas behind life cycle analysis, inventory, impact evaluation, and analysis. Considering a product's life cycle is necessary for legitimate environmental labelling, hence there is a close relationship between the 14020 series and 14040 standards.

The ISO and IEC guides (such as ISO Guide 64) are made to assist those creating technical standards by encouraging them to take the environment into account while designing their products and processes. The three environmental label types recognized by ISO are briefly summarized below:

Type I environmental labelling - principles and practices: This is a sequence of steps to set up and manage a type I programme, often known as an eco-logo programme. For the purpose of confirming that a product or service meets a

predetermined set of requirements, type I programmes use a third-party certification process. Through these initiatives, third-party verifiers will receive help in creating criteria, compliance, systems, and operating processes for granting eco-logos.

Type II environmental labelling - self-declared environmental claims: This method outlines frequently made environmental claims, develops standards for the Mobius loop markers' use, and proposes test-methodologies that can be used to validate these claims.

Type III environmental declarations: This method establishes a structure for presenting quantitative life cycle data (environmental burdens, such as energy consumed, emissions produced, etc.). It talks about declarations and labels used in business-to-business transactions, which only need internal data verification and not certification from a third party. Third-party certification is necessary for business-to-customer declarations.

1.4.3. Green marketing activities taken by Indian companies:

The green marketing initiatives taken by different Indian companies are given as follows and these initiatives reports are taken from the company website, annual report and press release.

i) Colgate Palmolive: As a part of its dedication to sustainability, the global leader in oral care has introduced recyclable toothpaste tubes in India. The first company to take such action on such a massive scale is Colgate, which has a 53% market share and a market capitalization of Rs 15000 Cr. Colgate is the market leader in the oral care area. For this project, they have teamed up with EPL(formerly known as Essel Propack Ltd.), and they are willing to share this technology with other businesses. By 2025, its main rival Hindustan Unilever Ltd. expects to have toothpaste tubes made of recyclable materials.

ii) Dabur also intends to stop using boxes for their Dabur Red toothpaste. They have worked with Reliance Retail to sell these products without carton packing in some of its outlets. The paper that was so rescued would be used to make notebooks for underprivileged kids, funded by Child Rights and You (CRY). About

150 tons of paper should be saved, and Dabur expects to reduce environmental waste.

iii. Procter& Gamble India has introduced a 200-billion-rupee environmental sustainability fund. According to P&G, this fund is consistent with their "Ambition 2030" global sustainability goals, which are intended to have a positive influence on both the environment and society. The company will use the money to work with other partners to develop ecologically friendly solutions.

iv. Amazon has promised to take a number of actions to totally stop using single-use plastic in all of its fulfilment centers in India. According to Amazon, since December 2019 they no longer be used bubble wrap or air pillows in their packing. Additionally, the company has switched out plastic tapes for biodegradable paper tapes. By 2030, 50% of Amazon's shipping should be carbon-neutral.

v. WIPRO Green IT: In order to help achieve a sustainable future, Wipro cut expenses, lower carbon emissions, and improve efficiency—all while protecting the environment. "Green Machines" from Wipro (Only in India) environmentally friendly computer peripherals were initially introduced by Wipro Infotech in India. The Wipro Greenware line of computers and laptops is a new offering for the Indian market from Wipro. Because of their compliance with RoHS (Restriction of Hazardous Substances), these goods help to reduce environmental e-waste.

vi. Green IT@SBI at State Bank of India: SBI created a green service called "Green Channel Counter." SBI offers a variety of services, including digital banking, where all transactions are made using SBI shopping and ATM cards rather than conventional deposit slips, withdrawal forms, cheques, or money orders. State Bank of India uses wind power to cut emissions.

vii. ITC Limited: ITC (Imperial tobacco company) increased their dedication to environmentally friendly technologies by launching the initial ozone-treated elemental chlorine-free bleaching technique in India. The outcome is a completely new selection of high-quality green products and solutions, including ecologically friendly versatile paper that is less hazardous than its conventional method.

viii. Tata Group of Companies: Tata Motors Ltd. designed its showroom utilizing environmentally friendly materials and design aspects. It demonstrates an environment that is welcoming to visitors. They will also release a low-cost water filter that uses only natural and pure materials.

ix. Parle Agro Pvt. Ltd: All of the company's PET (polyethylene terephthalate) bottles, including paper-based packaging components, are 100 per cent recyclable. Company collects and recycles 100% of PET bottle trash under the Plastic trash management (PWM) programme. Water conservation through lowering water use at the facilities and implementing rainwater harvesting projects. The firm has placed Reverse Bottle Vending Machines to educate and encourage customers to reduce their use of plastic and recycle their plastic trash.

x. Patanjali Ayurveda ltd: Patanjali's products are chemical-free products, the utilization of renewable energy sources through installation of solar energy equipment. Recycling the trash and creating the by-products such as dish wash bars. The biogas plant was launched. Three phases of quality control guarantee that the output is free of toxins. To the greatest extent feasible, the company use natural components such as citric acid. The battery-powered cars are utilized within the confines of the Haridwar manufacturing site. The corporation has implemented efficient water consumption, recycling, and rainwater harvesting systems in its manufacturing centres. Packaging that is recyclable and reusable. Using green themes in advertising and promoting their products, as well as environmentally friendly branding of their products.

1.5. Customer perception

Perception is an important component of many theoretical frameworks utilised in nursing research. It is a three-level approach that converts raw information into meaningful images. Customer perception, according to Walters et al., (1989), is "the complete method by which a person gets responsive to the environment and interprets it so that it will work into his or her frame of reference". Perception occurs when the sensory system receives inputs through the mind, codes and categorizes them, and assigns meaning to them based on the individual frame of reference. A

person's frame of reference is made up of his previously held realities, faith, likes, dislikes, biases, feelings and other psychological responses to an uncertain starting point (Walt, 1991).

Marketing may be difficult and time-consuming at times. It is due to the intricacy of the human brain and how it works. Customers' thoughts are changeable, yet they tend to converge when they exhibit specific emotions and behaviours. Many of the complex ideas and behavioural patterns displayed by customers may be merged into a notion known as customer perception. The placement of a product or service by the customer is heavily influenced by the mental image the customer has formed of it. The success of a product or service is determined more by what customers perceive of it than by its actual attributes or performance.

1.5.1. Factors influencing customer's perception:

i. **Company Image**: The public image or reputation of a corporation influences customer perception. Customers' perceived value will rise if a firm has a strong reputation in the market. Consumers' emotional and psychological connections to a company are essentially represented by its company image, which is crucial in influencing their purchase decisions. A strong reputation may boost word-of-mouth advertising, customer loyalty, and eventually sales.

ii. **Distinctive product characteristics and design:** The distinctive features and design of the product provide a competitive advantage in the market. For example, Harley Davidson motorcycles and Rolex watches have distinct features and designs that set them above the competition. Product design is inextricably linked to brand building. However, goods are essential to a brand's identity, especially for luxury companies, because they capture every aspect of the consumer experience (Keller, 1993; Keller & Lehmann, 2006; Wiedmann, Hennigs, & Siebels, 2007).

iii. **Product packaging**: It is the method of developing the cover of a brand or product. Packaging is a type of marketing that performs purposes including attracting people, explaining the goods, and selling it.

iv. **Accessibility:** The foundation of a satisfying shopping experience, steady product availability is what guarantees a steady revenue stream and loyal customers. The company may lose to direct rivals if it does not offer the correct items at the proper time and pricing.

v. **Brand Awareness**: Brand awareness refers to a potential buyer's capacity to recognize or recall that a brand belongs to a particular category of goods. Buyers frequently choose a well-known brand. A brand's popularity makes it more trustworthy in the opinion of purchasers. As a result, a well-known brand will be chosen over an unfamiliar one.

vi. **Price:** The price of a product can influence buyer impression. When the price charged is reduced, price-sensitive clients may have a good opinion of the product. Non-price-sensitive clients may have a good view of the product even at a greater price if they are happy with the brand's other features.

vii. **Recommendations:** The advice of others strongly influences customers' purchase decisions. However, the amount of such an effect depends on the context or person. Later adopters are typically more driven than early adopters.

1.6. An overview of Assam

Assam lies in the north-eastern part of India and has the largest population of the northeast and the second largest in an area. It has a total area of 78,438 km2 (30,285 sq miles).The state is bordered by Bhutan and the state of Arunachal Pradesh in the northern side; Nagaland, Arunachal Pradesh, and Manipur in the eastern side; Meghalaya, Tripura, Mizoram, and Bangladesh in the southern side and West Bengal in the western side. Assam lies within three of India's six physiographic divisions - the Northern Himalayas (Eastern Hills), the Northern Plains (Brahmaputra plain), and the Deccan Plateau (Karbi Anglong).

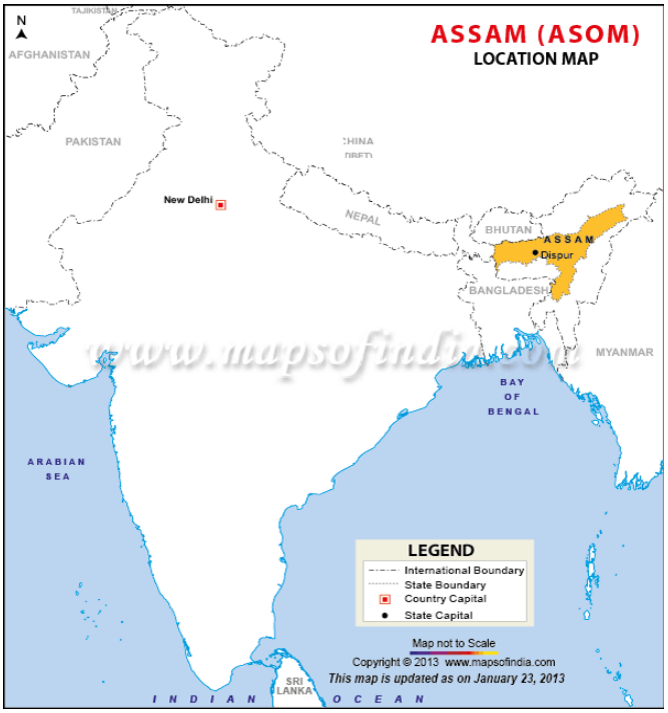

Figure 1.6: Location of Assam in India

1.6.1. Geography of Assam

According to geomorphic research, the Brahmaputra, which is Assam's lifeblood, is an antecedent river that predates the Himalayas and has established itself ever since the mountains began to rise. The river that flows through Arunachal Pradesh's high gorges and rapids eventually braids into Assam, becoming 10 mi/16 km broad at certain points. Its tributaries then combine to form the Brahmaputra Valley, which is 600 mi/1000 km long and 50–60 mi/80–100 km wide (Singh, 1971). Originally a part of the South Indian Plateau system, the hills of Karbi Anglong, North Cachar, and those in and around Guwahati (also known as the Khasi-Garo Hills) are now degraded and divided (Singh, 1971). The Barak River rises in the Barail Range, which forms the border between Assam and Nagaland, and runs across the Cachar district, forming a valley that is 25–30 miles (40–50 km) wide, eventually entering Bangladesh.

1.6.2. Demography of Assam

The whole population of Assam was 31,169,272 according to the 2011 census. With a growth rate of 16.93%, the state's overall population has expanded during the

previous 10 years, from 26,638,407 to 31,169,272. There are 31 Administrative Districts in the State of Assam. The boundaries between the districts are established by natural features like hills, rivers, woods, etc. Subdivisions of the previous districts make up the majority of the recently created districts. Along with the previous 27 districts, three new ones Charaideo, South Salmara-Mankachar, and West Karbi Anglong were established on August 15, 2015. Majuli was likewise designated as a district on June 27, 2016. With a total size of around 10,434 square kilometres, Karbi Anglong is the biggest district in Assam, followed by Sonitpur, which has 5324 square kilometres. Majuli, the first river island district of India, evolved out of the northern regions of Jorhat.

1.6.3. Climate of Assam

Assam experiences a wide variety of typical temperatures, with August highs reaching the upper 90s F (about 36 °C) and January lows reaching the mid-40s F (about 7 °C). Typically lasting from October to February, the chilly season is characterized by fog and light rain. The state avoids the typical hot and dry season in India. While there is considerable rain from March to May, the southwest monsoon, which begins in June and lasts until September, brings the most precipitation and frequently results in extensive and deadly floods. Assam has some of the greatest yearly rainfall in the globe, not just in the nation. The average annual rainfall varies from around 70 inches (1,800 mm) in the west to over 120 inches (3,000 mm) in the east.

1.6.4. Culture of Assam

Assam is the crossroads of many civilizations. The inhabitants of the fascinating state of Assam are a blend of several ethnic groups, including Aryan, Indo-Burmese, Indo-Iranian, and Mongoloid. After a protracted period of assimilation, all these races have come together to form the rich and diverse tapestry that is Assamese culture. Assamese, the state language of Assam, is called "Asomiya" (Assamese) by its indigenous population. There are many different tribes in the state, and each has its own customs, traditions, cultures, attire, and distinct way of life. Assam is home to a diverse range of tribes, including the Bodo, Kachari,

Karbi, Miri, Mishimi, Rabha, and others. While Assamese is the official language of the state, most tribes also speakstheir own languages.

Most Assamese people belong to the Vaishnava branch of Hinduism. The Vaishnavas practise "Naamkirtana" which is reciting the praises of Lord Vishnu, and reject the worship of idols. The "Satras," a location of religious and cultural practise that dates back more than 400 years, and the "Naamghar," a house of prayers, are the two significant religious and cultural institutions that have an impact on Assamese culture. Members of a nearby centre of devotional worship known as "Naamghar" serve as the primary basis for villager associations. Families from various separate castes typically reside in villages.

1.7. Literature Review

The literature review has been divided into five parts according to the concepts taken into consideration viz. green marketing, environmental concern, customer perception, greenwashing, green purchase intention.

i. Green Marketing

Polonsky & Rosenburger (2001) concluded that organizational greening could take place across eight operations such as "green designing, green pricing, green logistics, green promotions, market targeting, green positioning, management of waste, and green alliances". The 1990s saw change in customer perceptions, irrespective of whether green marketing was perceived an aspect of the niche market

Zsolnai (2002) summarized green business activities as one that has incorporated and assimilated the principle of conservationism through the various activities of the business. Few previous researches have shown that the presence of natural goods on the market is not effective due to the egocentric attitude of marketers to their commodities and greenness outside the wider viewpoint of customers or other financial firms.

Gilbert (2007) has addressed practices carried out in such a way that either have a minor negative environmental impact or, as an environmental business practice, actively promote the surrounding ecosystems in one way or another. It is a

priority to mark a product as environmentally friendly. It is with the opinion that marketing, as an essential part of an enterprise, should strive to please customers while also taking societal views into account.

Grant (2007) addresses the structure of green marketing split into 3 parts: green, greener and greenest, that demonstrates the scope of promoters' commitment by introducing appropriate criteria, sharing obligations and fostering creativity, meanwhile. Green Marketing allows brands to involve people in a new marketing process by encouraging green lifestyles.

According to Thota (2012), practically every company has a variety of certified "green products" or at least one. Going green may first seem expensive, but in the long term it is highly beneficial and economical. The rise in environmental contamination is the primary driver of green marketing's evolution over time. Green marketing includes a range of initiatives, from water and energy conservation to the support of environmental concerns. Going green has many advantages, but there are also drawbacks. For example, it can be challenging to communicate to customers the environmental advantages of a product. Likewise, any drawbacks should be addressed carefully.

Khusravi & Ilami (2014) uses social responsibility acting as a mediator, their research sought to determine the link between green marketing and competitive advantage. Primary data was gathered from participants in the sales and marketing department using a questionnaire. At 99% confidence level, the findings revealed a substantial and positive association between all the variables. Additionally, a regression analysis model demonstrates that green marketing accounts for 47% of the variance in competitive advantage and that there is a linear link between the two. The influence of green marketing on social responsibility is negligible, yet there is a linear link between the two. Furthermore, social responsibility affects competitive advantage, and CSR is responsible for 44% of the variance. When all three of these were examined together, green marketing and CSR—where social responsibility is thought to be a mediator—were shown to be responsible for 65% of the variance in the competitive edge, as demonstrated by the Sobel test.

Grimmer & Woolley (2014) focused on the buying intentions of customers by studying whether it is affected by the nature of the green marketing messages individuals get and their degree of ecological involvement—which is assessed using components of behavioural, emotional, and cognitive attitudes—modifies this impact. A sample of 171 university students saw one of three print advertisements that included a traditional product commercial, an advertisement highlighting a personal benefit from buying the goods, and an advertisement advocating a strictly environmental benefit. The three styles of commercials had no different effects on participants' green purchase intentions, it was discovered that the respondents' degree of environmental affect tempered that impact. Participants who had higher levels of environmental affect responded favourably to the pure ecological advertisement, whereas those with lower levels of affect responded favourably to the personal environmental advertisement.

In the study "Green Marketing and Business Benefits," Durmaz and Yasar (2016) discussed the advantages of green marketing for businesses, such as increased sales, improved customer reviews, increased competitiveness, improved business image, and improved community outreach. They also mentioned why green products are facing challenges in the market, as the green product cost a premium charge and customers does not will to pay more, and even sometimes the product doesn't provide the expected result.

Chandra (2019) explored the development of green marketing in India. The study finds that the customer demand for environmentally friendly products is rising as a result of customers' changing cognitive attitudes about the environment. The concept of green marketing was created by companies and organisations in order to measure and create green goods, green brand experience, green brand image, green confidence, and green satisfaction all in one.

Khan et al., (2019) in their study they explored on how the green marketing mix and eco-labelling strategies mediate the positive effects of environmental entrepreneurship on small businesses' commercial performance. They used a representative sample of owners/managers of 160 small enterprises from Bangladesh

that were involved in manufacturing, services, and commerce to assess utilising a multiple mediation technique. They drew on the natural resource-based view (NRBV) and the dynamic capability view (DCV). Partial least squares (PLS) approach of variance-based structural equation modelling (SEM) to assess the study's hypothesis. According to the findings, eco-labelling and green marketing methods help small businesses operate better in their daily operations.

Mursandi et al., (2020) conducted a study to evaluate and ascertain the impact of green marketing and corporate social responsibility on The Body Shop's brand image, buy intention, and decision among Samarinda customers. The study employs a quantitative methodology and the SmartPLS software. 152 people were included in the sample using an incidental sampling strategy. The findings demonstrated that green marketing has a considerably favourable impact on brand perception. Green marketing has a very favourable impact on customers' intentions to buy. Corporate social responsibility has a little impact on brand perception. Corporate social responsibility has a very beneficial impact on customers' intentions to buy. Green marketing has a very good impact on customer choice. The buying choice is not greatly influenced by corporate social responsibility.

Kim & Cha (2021) attempted to describe the effects of customer innovativeness on the linkage between green advertising features and green purchase intention. Data was analysed using 200 valid surveys and structural equation modelling was used after gathering data from South Korean customers. Three characteristics of green advertising such as attractiveness, dependability, and informational value were found to be positively correlated with green purchase intention by the analysis, which also highlighted the moderating influence of customer innovation in those connections.

Kaur et al., (2022) examined the relationship between green marketing mix methods and customer green purchasing intentions in a developing economy. The emphasis was on millennials' intentions to purchase environmentally friendly personal care items and how green marketing methods may affect those intentions. Customers' environmental attitudes and the function of customer demographics as

control factors are both evaluated for their moderating effects. Structural equation modelling was employed in the study to validate 405 answered from millennial users of eco-friendly personal care items. The control variables were evaluated using multi-group analysis. Results showed that green purchase intentions are highly impacted by green items, green places, and green promotional techniques. Some intriguing findings were produced by the moderating effect of environmental attitude.

Tan et al., (2022) proposed a model where linkages were evaluated using structural equation modelling (SPSS-AMOS), which was suggested after data from 300 Pakistani respondents were obtained. The findings show a strong positive correlation between actual green marketing tactics (green knowledge, attitude, environmental awareness, and intention to purchase green products); additionally, positive customer choice intentions are fostered by green goods that have superior ecological qualities. Furthermore, the environment, green knowledge, and green marketing techniques all directly and significantly affect the perception and credibility of the green movement. According to this study, using green strategies as a brand marketing tactic can increase customers' propensity to make purchases. The study also revealed that brand equity may be built and preserved with the use of green marketing.

Majeed et al., (2022) conducted research where they focused on likelihood of purchasing eco-friendly goods was investigated in connection to variables such eco-labelling, eco-friendly packaging and branding, and eco-friendly goods, premium, and price. Based on the responses of 450 respondents to a survey, this study assesses a model that uses green marketing strategies. The article also examined how customer environmental attitudes and brand image affect the relationship between green marketing and intentions to make green purchases. The structural equation modelling (SEM) method is used to validate the framework of this study. According to the study's findings, green marketing strategies have a considerable and favourable impact on customers' intentions to make environmentally responsible purchases. It was found that green brand perception and customer environmental sentiments significantly affected the path coefficient between green marketing strategies and

green green purchase intentions. This study's important findings suggest that people are becoming more receptive to green marketing.

Correia et al., (2023) examined whether customers' attention to businesses' green marketing messages affects their propensity to make green purchases. It also examined the significance of customer traits, such as gender, education, and environmental beliefs, in determining how much attention customers pay to businesses' green marketing communications. 690 valid responses from an online poll of adults in Portugal who are above the age of 18. Descriptive analyses, parametric and non-parametric testing, linear correlation, and regression analysis were all employed as data analysis tools. The outcomes allow us to draw the conclusion that customers pay attention to green marketing messages from businesses. Customer attentiveness to businesses' green marketing communications and green purchase behaviours were shown to be strongly correlated.

ii. Customer Perception

Mahapatra (2013) looked at the perception & attitudes of Indian customers toward the world in general. All over India, a study was established and performed. A total of 162 Indian customers answered the study and answered. The focus of this paper was to figure out what factors affect environmentally friendly behaviour for green goods. According to the survey findings, a proportion of participants seemed to be familiar with the concept of green, but there were some variations in their analysis of the concept. Awareness initiatives must be planned to encourage green goods and behaviours, recognizing the content of the message that should demonstrate the value of protection, well-being and benefits.

Ahmed (2015) conducted a study on "Green Marketing: Customers" Perceptions of Organic Foods in Dhaka City" with 300 customers at different markets and superstores to learn about their attitudes towards organic food and the reasons they choose or do not choose to consume it. The standard deviation, mean, and correlation analyses were used to analyzethe data. According to the study's findings, most customers have a favourable opinion of the many qualities of organic foods, which are environmentally friendly goods. In order to reduce pollution,

customers are now prepared to pay more for ecologically friendly items. It has been discovered that demographic factors including age, gender, wealth, and education all have a significant influence on people's impressions of green marketing.

Hundal and Kumar (2015) with the aid of a factor analytic framework, the present study attempts to identify customer expectations of environmentally friendly goods. Urge, integrity, interest, legal and understanding, as well as initiative and social welfare are all adopted in this research paper. A total of 100 graduates and postgraduate students from Amritsar (Punjab) was taken for this study. The research gives the inference that there is a lack of uniformity to label a commodity as sustainable unless certain regulatory authorities engage in the certification process.

Kapoor and Chaudhary (2016) investigated how customers felt about Patanjali goods. A study of 150 people was conducted to learn more about the elements that affect customers' decisions to buy Patanjali goods and their perceptions of Patanjali Ayurveda's overall marketing tactics. The results of the survey demonstrated that the most crucial variables affecting customers' decisions to choose Patanjali goods are product quality, brand perception, and trust. Sales of Patanjali are also being impacted by associations with Baba Ramdev. The average level of satisfaction with Patanjali goods was found in the data, nevertheless.

To determine how customers see green FMCG items, Patnaik et al., (2017) carried out research. The study found a significant correlation between client happiness and the idea of green products. Customers today place a greater emphasis on the food they consume, including the preparation, packaging, and other factors. They suggested that a client should at least take a general glance at a product's brand name and contents before using it, whether it be a little packet of shampoo or a container of talcum powder.

Shah (2017) in his study tried to cover Central Nagpur customers and attempted to understand the purpose of customers to buy green, questionnaire and interview methods were used as a means of gathering primary data. A convenience sampling technique was used to collect data from 60 respondents. The percentage method was used to analyze the results. Finally, it was proposed that in this

competitive period, marketing campaigns are important. As a result, the government can provide green initiative incentives so that marketers can sell green goods at fair prices.

Prasad & Susmitha (2018) conducted the research using to illustrates how customers feel about and have preferences for green marketing strategies and goods. 500 participants participated in this research. The customer base shown a high level of familiarity with green marketing techniques and goods. Besides among the responders, large levels of green values were discovered. Because customers place a high value on being environmentally friendly. The research has provided useful insights for those who market environmentally friendly goods and proposes that marketing communication campaigns promoting green goods be designed.

Kim & Lee (2018) intends to establish the connection between the role of the customer and the customer's perception and involvement in sustainable supply chain management (SSCM). Additionally, it attempts to investigate the connections between customers' perceptions of SSCM practices self-brand connection, trust, green purchase intention, and readiness to pay a premium. This empirical analysis chose the smartphone market and used 367 different sets of data. The analysis's findings demonstrated that a brand's SSCM is seen favourably by customers, who are thus more likely to be connected to and trust their own brands. The relationship between the customer's self-brand and trust were both positively correlated with their engagement in SSCM.

Kaur & Kaur (2019) conducted research on “Connecting the dots between brand logo and brand image” with 173 respondents. The Kruskal Wallis H Test, Conjoint Analysis, and descriptive statistics were used to analyse the data. The study came to the conclusion that while making a purchase, customers prioritise quality and price. Due to the patronage of merchants, FMCG items do not give any attraction. Additionally, the utilitarian motivation analysis informs us that the brand is the least significant feature and the awareness medium is the most important attribute. Furthermore, it should be emphasised that customers consider national

brands that offer price reduction promotions and use the internet as a channel for spreading awareness to be of the utmost value.

Meiting and Hua (2020) discussed about the effect of different shape of brand logos and its effect on customer perception, further the study found that the brands having round shape is more appropriate in the use of green marketing rather than angular shape brands. The brand shapes also have effect on gender perception towards it.

Madhankumar (2023) investigated the effects of various green marketing methods on customer perceptions of green products and their decision to buy based on the Theory of Reasoned Action. An empirical study was carried out among customers who had at least made one green product purchase in their lives. 204 customers were used as the sample size, and the statistical data suggested a substantial correlation between marketing tactics, product attributes, customer green values, and customer perception. The study has important ramifications for ecological stakeholders. According to the survey, customers' attitudes towards green products were generally favourable and they really wanted to preserve the current and future state of affairs. According to the survey, customers have a generally good attitude towards green products and a sincere desire to preserve the current and future level of ecological sustainability. Be it food or everyday items, customer adoption of green products has grown quickly.

Arici et al., (2023) identified ecologically friendly themes and concepts. This study looked at customers' green TripAdvisor evaluations. The variations among the 10 nations in terms of the quantity of green evaluations and the green satisfaction scores of customers were also examined. The study used a mixed research approach to examine 121,780 TripAdvisor reviews for 87 eco-friendly hotels in the top 10 travel destinations using Leximancer analysis and multivariate analysis of a large dataset. According to the Leximancer research, the room, everyday, hotel, staff, front, food, coffee, great, experience, and vacation themes are the ones that are most frequently cited in customer green evaluations. Additionally, the data indicated that

Italy, the United States, and Turkey had the greatest satisfaction ratings, while Germany and France had the lowest scores.

iii. Greenwashing

Delmas (2011) observed that more firms were engaged into greenwashing with positive saying towards the environment. However, it somehow has a negative effect towards the firms credibility. It only improved the firm's profitability by having a negative impact on society. He suggested that the regulatory bodies and the NGO's should provide certain rules and regulations to minimize such acts by firms. The study evaluated different drivers that encourage greenwashing practices.

Nyilasy et al., (2014) looked into how brand opinions and green purchase intentions are affected by green advertising and a company's environmental record. A 3*3 (firm's environmental performance and its advertising efforts as independent variables) experiment was carried out with 302 participants, utilising the firm's environmental performance and advertising efforts as independent factors. Results showed that compared to regular corporate advertising and no advertising, the negative impact of a firm's poor performance on brand attitudes increases higher in the presence of green advertising. Additionally, more negative brand views are produced by both green and regular corporate advertising than by no promotion when the company's environmental performance is strong.

Rahman et al., (2015) proposed a theoretical model and evaluated to see if customers' scepticism of hotels' ecological promises was impacted by their awareness of the hotels' hidden agendas. This scepticism, in turn, affected customers' intentions to engage in the hotels' linen reuse programme and to stay there again. On the association between scepticism and intention to engage as well as among scepticism and desire to return, ecological concern's moderating effects were also investigated. With two conditions (control vs. ulterior purpose), a quasi-experimental approach was employed with research participants drawn from the employees of a US public institution. 638 helpful replies were given in total. The results of this investigation suggested that hotels could have had a hidden agenda while making their environmental claims. Customers' plans to participate in the linen reuse scheme and

return to the hotel consequently declined. Scepticism was shown to have a role in mediating the relationships between participation intention and ulterior motivation as well as return intention. Customers' environmental concern was not shown to mitigate the link between scepticism and intention to participate in the linen reuse programme and scepticism and desire to return to the hotel.

Aji & Sutikno (2015) studied the relationship between greenwashing and green trust by focusing on the extended and ultimate repercussions. They examined the notion of perceived customer scepticism as the prolonged effect of greenwashing. Ten hypotheses were put out in the study, a structural model with six variables was created, and correlations in the model were verified using a purposive sampling approach, which entailed an online and offline survey of a sample of green customers in Yogyakarta, Indonesia. This study discovered a correlation between greenwashing and perceived customer danger, actual customer risk, and green scepticism.

Brouwer (2016) evaluated the customer perception through focus groups both before and after revealing the truth about greenwashing practices used by the corporates. It was found that the green eco labels, branding etc have a influencing effect on the customer buying behaviour, but at the same time customer feels that they should be informed before itself for decision making.

Katait (2017) focused solely on the dramatic increase of green washing, its various types, the factors for its development, as well as the indications and faults of green washing, that may be useful for customers to understand the green washed goods. The study suggested that the firms should avoid using the colour green in their logos for various items. A green evaluation should be established to determine the suitability of businesses in terms of environmental protection. The administration should use the media to keep businesses accountable. Corporate codes of conduct and advertising guidelines should be updated & the natural world.

Zhang et al., (2018) combined the moderating effect of green concern with the mediating role of green word-of-mouth (WOM) to examine on how customers' perceptions of greenwashing influence their intentions to make green purchases. The results of a questionnaire survey conducted among 553 battery users in China

demonstrate that customer perceptions of greenwashing negatively impact green purchase intentions both directly and indirectly through green word-of-mouth. Additionally, the negative correlation between perceptions of greenwashing and intentions to make green purchases is strengthened by green concern.

Nguyen et al., (2019) examined how knowledge and information affect the link between intentions to buy green products and instances of greenwashing. Using an online survey, information was collected from 419 Vietnamese customers who had purchased green veggies. Green scepticism acted as a mediating factor in the multivariate data analysis that showed greenwash was inversely connected with intentions to make green purchases. Additionally, it was demonstrated that knowledge and information had a moderating influence. These findings add to the understanding of the connection between greenwashing and aspirations to make green purchases.

Jong et al., (2020) in their study investigated the results of varying levels of greenwashing in this they used random 3*2 experimental research in the cruise industry. Six control parameters were developed based on behavioural claim greenwashing (a company speaking the truth or telling lies or half-truths) and intention greenwashing (an organization really cares about the environment or just are bound due to legal obligation). Environmental sustainability, product and service efficiency, and financial performance were the three corporate credibility constructs studied. Lies and half-lies had similar adverse effects on credibility as true green action. Claiming responsibility for adhering to the law had no major impact. Unjustly claiming credit had a negative effect on credibility only in the case of true green conduct. Overall, the results indicate that only genuine green action can have the desired reputational benefits.

Xiao et al., (2022) attempted to analyze the integration of the mediating impact of brand hypocrisy and the moderating influence of CSR-CA belief. This study seeks to understand how greenwashing affects customers' brand avoidance. 317 customers filled out a survey that provided the data. Using the SPSS process programme, hypotheses were evaluated in a first-stage moderated mediation model

using a bootstrapping technique. The research results showed that brand avoidance is positively impacted by greenwashing, with brand hypocrisy serving as a partly mediating factor. In contrast, at greater levels of CSR-CA perception, greenwashing had less of an impact on brand hypocrisy and brand avoidance. A higher degree of CSR-CA belief also results in a lesser mediating impact of brand hypocrisy.

Sun & Shi (2022) developed a moderated mediation model to show that customers' perceptions of greenwashing affect their intentions to make green purchases. Additionally, it shows that this effect is tempered by customers' beliefs about environmental responsibility and mediated by their emotions of abandonment. Amos 24.0 and SPSS 24.0 were used for a regression analysis to test the hypothesis following the distribution of 220 questionnaires through an online survey. The results showed that customer beliefs about greenwashing have a negative influence on customers' intentions to make green purchases, that perceptions of betrayal act as a partial mediating factor in this relationship, and that environmental consciousness amplifies the negative effects of customer beliefs about greenwashing on the motivations behind green purchases.

Setiawan &Yosephani (2022) examined the relationship between customer intentions to buy green products and perceptions of greenwashing. The strategic relationship between these two crucial dimensions in green marketing is an area of important study need. Individuals, namely customers who are aware of drinking water products in single-use gallon containers, serve as the study's analytical unit. Purposive sampling was used to choose the sample, which included 500 respondents. The instrument's validity and dependability are examined using confirmatory factor analysis. The study hypothesis was tested using the structural equation modelling (SEM) methodology. The findings indicate that the notion of "greenwashing" has a negative and significant impact on customers' propensity to make green purchases. Customers' intentions to make green purchases are closely related to how greenwashing is perceived.

Ghassani et al., (2022) conducted research to ascertain the relationship between green purchasing intention and greenwashing, green word of mouth, and

attitude towards green products. To comprehend attitude better, green trust is investigated. Theory Reasoned Action is the technique employed. They have employed the purposive sample method on 227 people. PLS-SEM was used to assess the results. This study showed that while green word of mouth and green trust had little impact on green purchasing intention, greenwashing and attitude towards green products have more impact. The research demonstrates that while greenwashing has no effect on green trust, green word of mouth does, while green trust and favourable word of mouth have a beneficial impact on attitude towards green products, greenwashing has no effect on that attitude.

Lopes et al., (2023) intends to investigate how corporate greenwashing practises affect customers' intentions for circular consumption when such intentions are influenced by customer information seeking and environmental concerns. In order to achieve this, a sample of 826 reliable customer answers from Portugal was gathered. The partial least squares approach was employed and a quantitative methodology was used. The study discovered that customers' environmental worries and willingness to look for sustainable information are favourably impacted by greenwashing. In turn, these elements favourably affect their intentions about circular consumption. The findings cast doubt on the notion that greenwashing is always bad and point to its contradictory role in advancing sustainability.

Fella & Bausa (2023) investigated customer views of these goods and explored whether customers can reliably detect greenwashing. Customers may classify a new product as honestly green, greenwashed, or regular depending on existing knowledge of various green signals, according to categorization theory. In a within-subject trial (N = 174) carried out in Germany, it was discovered that buyers frequently fell for greenwashing when just asked about their purchasing intentions. The findings add to the body of knowledge on how customers interpret verbal and visual product cues that have been "green(washed)". Second, it offered preliminary data refuting the underlying premise in the literature on greenwashing and green advertising that customers can tell the difference between items that are truly green and those that are not.

iv. Environmental Concern

Rowlands et al., (2002) concentrated on three considerations which should be addressed by manufacturers of green energy products: investment, understanding of environmental issues, and environmental recognition. The study continues with a final note there is a substantial difference in the analysis with respect to the ability to charge a considerable green power premium.

Alsmadi (2007) revealed the mentality of Jordanian buyers toward environmental concern and their ability to follow environmentally sustainable consumption actions in his research. An observational analysis collected a data set of 303 university students from Jordanian universities using a drop-off strategy. Because of greater preference for conventional products and poor efficiency for "green" products, however, there appears to be no or less interest in customers purchasing action.

Eco-labels on goods, as per Krishnamoorthy (2008), allows customer to have an understanding of the processing phase of the product with minimal environmental impact. These tags set requirements for environmentally friendly goods to reduce emissions of pollution in air and water, to minimize consumption of natural resources, to reduce ozone depletion and the threat of climate change, to avoid chemical contamination and to safeguard fish and wildlife and their ecosystems.

Delafrooz et al., (2014) concentrated on corporate packaging and labelling, which is a new green marketing technique. As per them, factors such as individual-psychological marketing, cultural and mixed circumstances influence the purchasing behaviour of the customer. He also looked at the effect of eco-labels, eco-brands, and ecological ads on customer purchase decisions. Presently, green marketing is not fulfilling its ability to enhance the quality of life of customers while enhancing the natural environment.

Nagaraju and Thejaswini (2014) discovered that as customers and advertisers become more responsible for the consequences of climate change and the adverse effects of pollution, they are more likely to produce and buy eco-friendly goods. In addition, most corporations have taken on the duty of not damaging the environment

by supplying their product with a chemical and not wasting environmental capital. The research design for this study was observational in nature and aimed to establish the perception and understanding of eco-friendly FMCG products by customers. A sample size of 60 Mysore area respondents was gathered through a standardized questionnaire. It was discovered that there is a correlation among product quality and customer perceptions of environmentally friendly FMCG goods. There is also a clear correlation between price and customer expectations of environmentally friendly FMCG goods.

Passaro et al., (2015) defines the concept and implementation of "sustainable" strategies at the monetary, economic and environmental area is an important instrument for responding to begun to evolve from diverse participants at various levels (local, national and supranational). The concept of sustainability implies a major change in the role between the business and society (defined broadly). The study is based on the multinational IKEA, between those employed in the furniture industry, in order to determine whether the implementation of socially responsible behaviour has a beneficial impact on the turnover of manufacturing companies.

Reddy et al., (2017) discusses eliminating or significantly reducing detrimental impacts on the environment and natural resources. Businesses that value and respect the environment's resources for both commercial and non-commercial purposes significantly advance sustainability. Green marketing is therefore turning into one of the most crucial business strategies used by companies nowadays. People are the most important component of the triple bottom line, which also includes the environment and benefit. Additionally, marketers need to understand that, in addition to being morally right, green marketing can be lucrative.

Lin & Niu (2018) they focused on the customers of Taiwan and 649 valid questionnaires were located. In order to extract the trait components, exploratory factor analysis was utilised. Confirmatory factor analysis and structural equation modelling, on the other hand, were used to the scale and structural model, respectively, for verification. The outcome demonstrates how customers' environmental awareness, knowledge, and cultural standards have a beneficial

impact on their environmental attitude as well as their perception of wellbeing. Green products are being preferred by customers in both intention and behaviour.

Shabbir (2020) proposed that eco-labelling, eco-branding, eco-packaging, pricing, and other factors influence customer behaviour in his study on the relationship between green marketing practises and environmental behaviour. The study found that customers in the United Arab Emirates are positively impacted by environmental ideas and concerns. Additionally, the study offered many recommendations for enhancing green marketing and fostering a positive outlook on society.

Rusyani et al., (2021) conducted a study and in order to find out what motivates Indian customers to purchase environmentally friendly products, they compared their environmental knowledge (EK), environmental concern (EC), green attitude (GA), and perceived behaviour control (PB) in their study "Purchasing Eco-Sustainable Products: Interrelationship between Environmental Knowledge, Environmental Concern, Green Attitude, and Perceived Behaviour." Data from 514 respondents were gathered using snowball and purposeful sampling strategies. Using IBM SPSS 23.0 software for data analysis, exploratory component analysis, a homogeneity test, Pearson's correlation, and multiple regression for a multicollinearity test were performed. The results demonstrated that customers' decisions to purchase environmentally friendly items are highly influenced by the favourable relationships between EK, EC, and GA. In addition, the strongest factors of PB for eco-friendly goods are EK and EC. This study will assist green marketers in creating fresh green plans to boost sales and cultivate connections with target green customers.

Kumar et al., (2022) conducted research where the theory of planned behaviour (TPB) model was applied together with environmental concern, individual moral standards, and perceived customer effectiveness. The proposed model was assessed using variance-based partial least square-structural equation modelling (PLS-SEM). The results showed that perceived behavioural control, followed by individual moral standards, attitude, and perceived customer efficacy, had the

strongest significant positive influence on green purchase intention. Through three key TPB factors and individual moral standards, environmental concern was revealed to indirectly influence purchase intent. To investigate the moderating impact of perceived customer efficacy on an attitude-intention connection, multi-group analysis (MGA) was used.

Chen et al., (2022) examined the relationship between environmental concern and ecological purchasing behaviour to better understand why people act in ways that benefit society. The researcher also assessed prosociality's moderating effect. A self-administered questionnaire was used to collect the data, and a structural equation model was used to confirm the statistical hypothesis. The results demonstrated that bringing up environmental issues with clients may effectively alter their purchasing behaviour for eco-friendly goods. Therefore, an ecological customer's purchase selections are directly influenced by their ecological responsibilities and thinking. Environmental concern positively influences ecological attitude and ecological responsibility through ecological values and ecological impacts. The moderating influence of prosociality is also important. The links between ecological responsibility, ecological attitude, and ecological buying behaviour are positively moderated by prosociality.

Simanjuntak et al., (2023) examined how environmental awareness, word-of-mouth (WOM), and green marketing affect customer intentions to buy environmentally friendly goods. Structural equation modelling was used to analyse a total of 159 valid surveys. The research findings showed that environmental knowledge strongly influences attitudes towards environmental protection. The intention to buy green items is also strongly and favourably impacted by green marketing and environmental concerns. WOM and green marketing, on the other hand, have little impact on people's views towards the environment. The inclination to buy green items is similarly unaffected by environmental awareness and WOM.

Chen et al., (2023) conducted a survey using a self-administered questionnaire that was distributed by enumerators in two major Pakistani cities (Lahore and Karachi), of which 349 were useful for the data analysis procedure.

Using structural equation modelling with partial least squares in Smart-PLS 4.0, the hypothesized associations were verified. Empirical results indicated that green marketing (GM) and green customer value (GCV) had a favourable effect on brand awareness (BA), environmental concern (EC), and eco–conscious consumer behaviour (ECB). The results also showed that BA and EC had a limited mediating impact on the connection between green marketing, green customer value, and eco – conscious consumer behaviour. The moderating effect of felt obligation (FO) on the link between BA and ECB was also noted in this study. The results demonstrate that the eco – conscious consumer behaviour is necessary for a sustainable environment.

Chao et al., (2023) empirically evaluate a model that can forecast the variables that influence students' recycling behaviour. Self-report questionnaires were used in a cross-sectional research of Taiwanese college students. Structural equation modelling was used to analyze 523 of the 800 distributed surveys. The models and assumptions were put to the test using partial least squares (PLS). The findings demonstrated that interpersonal kindness and motivation both had substantial beneficial impacts on recycling behaviour as well as motivation and place attachment have significant positive effects on interpersonal altruism.

v. Green purchase intention

Green purchase intention is defined as a person's propensity to buy a certain good or service (Bagozzi, 1981). In the field of marketing, the idea of purchasing intention is crucial. Intentions, which differ from attitudes, may be defined as a person's motivation in the sense of their deliberate effort to carry out a behaviour (Eagly and Chaiken, 1993). When an item or service is referred to be "green," it means that it is intended to be purchased in an environmentally responsible manner.

Green purchase intentions, according to Engel et al., (1995) in their book “The psychology of attitudes” may be divided into three categories: unplanned, somewhat planned, and fully planned purchases. Unplanned purchases are typically understood to be those that take place without any prior planning, such as those that happen in response to a rapid surge of stimuli. When a customer makes a purchase that was only partially planned, he or she has decided just on one product category or

one specific item. Later at the shop, the customer will decide on brands and kind of product. When a customer has decided on a certain product and brand before going to the store, the transaction is referred to as being entirely planned.

Ramayah et al., (2010) explored how perceptions about intentions to make environmentally friendly purchases may be influenced by values. According to the research, customer convenience and individual repercussions are inversely correlated with their inclination to buy green products. The likelihood of making an ecologically friendly purchase is not significantly predicted by environmental effects. The attitude towards environmental consequences was shown to be positively correlated with conservation value, but less so with personal repercussions whereas both self-transcendence and self-enhancement values were highly correlated with individual implications. The ambition to make environmentally friendly purchases was adversely correlated with personal repercussions and self-improvement value.

Paul & Rana (2012) comprehended the purchasing intents and customer behaviour of ecological clients. The focus of the study is to determine the factors influencing customers' perceptions of organic food. The method used to collect the data were in-person interviews using closed-ended questions from a standardized questionnaire. 463 people in all took part in the survey. Large sample sizes were employed in a variety of multivariate studies, such as multiple regressions, factor analyses, and cluster analyses. The results show that customer attitudes toward buying organic food are positively impacted by health, accessibility, and knowledge as indicated by demographic traits. Overall, customers are more satisfied with organic food than inorganic food, however, customer satisfaction levels vary depending to several circumstances.

Arli et al., (2018) analyses how customers' perceived readiness to be environmentally friendly influences their desire to buy green products in Indonesia a developing market. Three institutions, two sizable malls, and a number of residential districts in Yogyakarta, Indonesia, were the locations where a total of 916 questionnaire responses were gathered. The results showed that factors such as customer attitude, subjective norm, perceived behavioural control, pro-environmental

self-identity, ethical responsibility, and customer preparedness to buy green items are the factor which determine customers' desire to do so. The influence of customer attitude, perceived behavioural control, pro-environmental self-identity, and a perceived feeling of obligation on buying intentions are moderated by customers' preparedness to adopt green purchasing practices.

Phuah et al., (2018) ascertained how customers behave when it comes to the link between subjective norms, perceived behavioural control, and customer green purchase intentions for environmentally friendly food goods. In this study, 151 participants had structured questionnaire interviews. Simple random sampling was employed. The goal of this study was achieved using descriptive analysis, a reliability test, and hierarchical multiple regression. According to the findings, there is reason to believe that customer attitudes moderate the link between subjective standards and customers' intentions to buy environmentally friendly food items.

Yu & Lee (2019) found six variables associated with the overall perceived usefulness of upcycled items that affect various levels of product attitude and, in consequence, purchase intention. The study also looked at how buying experience affected how customers saw a product's worth and how they felt about it. The hypotheses were put to the test using survey data collected from 413 Americans. Three values such as green, emotional, and aesthetic were found to considerably improve both product attitudes and purchase intentions. The routes between green and functional values and product attitude were the only ones where the moderating influence of buying experience was discovered. The research has significance for academics, practitioners, and politicians who are creating campaigns to promote the purchasing of upcycled goods.

Although it's common to think of having awareness about green products as a direct cause of intending to make green purchases, there is conflicting evidence to support this**.** Wang et al., (2019) examined how customer green purchasing intention is promoted by product knowledge, using 236 samples. The results revealed that the relationship between green product knowledge and green purchase intent is slightly moderated by perceived customer effectiveness and green trust. Green purchase

intention and green trust are positively correlated, although perceived price effectively moderates this relationship. Green purchase intention is more strongly influenced by green trust when perceived price is high as opposed to low. Conversely, perceived cost had no moderating effect on the relationship between the desire to make green purchases and perceived customer effectiveness.

Dangi et al., (2020) suggested a conceptual framework of the purchase behaviour of organic food. Based on their relatedness, the components are divided into four groups. The elements were also examined in relation to time, area, and economic position of the country. Comparatively to the supply-related factor category, the influence of customer psychographics, socio-demographics, and product-related factor categories was shown to be more pronounced. According to the findings, the most significant influences on buying organic food are eco-labels, price, and faith in organic food, which are all individual variables such as health concerns, environmental concerns, knowledge and awareness. According to the research, eco-labels help customers feel more confident about purchasing organic products by minimising information asymmetry.

García (2020) conducted research on "Purchase intention and purchase behaviour online: A cross-cultural approach" with a sample of 584 internet shoppers from Spain and Colombia was used to evaluate the suggested approach. The following statistical tests were carried out using the EQS 6.3 programme: CFA, structural equations, measuring instrument invariance, and multi-group analysis. The study finds that among the cultures examined, self-efficacy in online retailers is a crucial element in the adoption of electronic commerce. Additionally, there is substantial data that supports the moderating impact of national culture on a number of interactions in the suggested model. The findings emphasise how crucial national culture is in understanding impulsive purchasing. According to the research, there are significant disparities between customers in developing and industrialised countries when it comes to the key factors that influence their intentions to make online purchases.

Liao et al., (2020) aims to ascertain the moderating impact of green marketing and green psychological benefits. It does this by establishing relationships between customer value, attitude, and green purchase intention. Empirical studies have revealed a significant and positive relationship between green customer value and how green products are perceived. Furthermore, opinions about eco-friendly products and the importance of eco-friendly clients have a beneficial impact on the inclination to buy eco-friendly goods. Green marketing (environmental advertising, green word-of-mouth) and green psychological advantages (warm glow, self-expressive benefits, and natural experience) influence the relationships between customer value, attitude towards the green product, and green purchase intention.

Mensah (2021) ascertained the ways in which the knowledge that university students had about green products influenced their intentions to acquire eco-friendly products. The main goals were to ascertain the impact of price, availability, value, awareness, and quality on university students' intention to purchase environmentally friendly products as well as how these factors predict such intention. A structural equation modelling approach was used to examine data collected from an online survey that was completed by 478 students. The results show that university students' intentions to purchase green products are most influenced by their perception of the quality of green products. Conversely, green perceived availability had the least amount of an impact.

Nekmahmud et al., (2022) undertook a study to examine customers' intentions to purchase eco-friendly goods as well as the ways in which marketing and social media activities affect customers' sustainable buying habits. They propose a novel approach for determining customers' intents to make green purchases using social media by including social media marketing, green thinking, and social media usage into the Theory of Planned Behaviour. The urge to purchase environmentally friendly products on social media is positively correlated with attitude, subjective norms, perceived behaviour control, green thinking, and social media marketing.

Moslehpour et al., (2023) explored the relationship between customers' intentions to purchase environmentally friendly goods in Taiwan's manufacturing

sector and environmental concern, understanding of green products, and eco-innovation. The study also examines the role that customer attention plays as a mediator between eco-innovation, green products, and environmental concerns as well as green purchase intent. According to the findings, environmental awareness, green product preference, green purchasing intention, and eco-innovation are all positively correlated. The research also showed that customer attention mediates environmental concern, environmental knowledge, green product, eco-innovation, and green purchasing intention in a substantial and beneficial way.

Lavuri et al., (2023) examined the elements that encourage green purchasing intention in the emerging market using the theory of planned behaviour, with the moderating effect of environmental information, including environmental concern, perceived control behaviour, and subjective norms. The results showed that concern about the environment had a significant impact on subjective norms, green attitude, and perceived behavioural control. Subjective norms had an advantageous effect on the green attitude but did not directly affect perceived behavioural control or green purchase intention. Green attitude and green buying intention were very moderately correlated with environmental knowledge.

1.8.Research Gap:

On the basis of the literature reviewed, there are number of studies done in many developed countries and in India regarding green marketing practices. However, the study has found that there has been no literature where the impact of environmental concern act as a mediator between green marketing dimension and purchase intention has been studied. Though environmental concern plays an important role in the shift to sustainability, there is a lack of study on the impact of environmental concern as a mediator between greenwashing and purchase intention. Previous studies focuses more on challenges and opportunities towards green marketing and exploring how advantageous is green marketing for the organization. As green marketing is an evolving area, it is important and evidently necessary to understand customer perception towards green marketing mix. Studying the perception of customers towards green marketing in Assam is necessary because of their prevailing

differences in economy, culture and environment. Thus, the study has been conducted to fill the gap of the above reviewed literature.

1.9. Significance of the Study

A range of different factors can be involved in green marketing, such as creating a sustainable and environment-friendly product, using eco-friendly packaging, incorporating sustainable business models, or concentrating marketing strategies that convey the green value of a product. Creating eco-friendly products and services has become a vital responsibility at the part of the marketers. It is not only about the industrial goods but also includes the service sector, both tend towards the ecosystem degradation of the ozone layer and its depletion. However, the most important part of green marketing is that they tend to get a competitive advantage for the environmentally friendly products in the market against the non-environmentally friendly products. It is equally important to know about the customer perception towards it to receive the advantage both in the form of marketing as well as advantage to the environment.

The study will be beneficial for the marketers, government and customers as well, marketers because it will help them to analyze the customer perception towards green marketing and accordingly, they can move forward to fulfil the needs of the customer. The government on the other hand will be aware about the customer perception towards green marketing and greenwashing and accordingly may take certain steps to provide an ecological friendly environment through various terms and conditions. For the customer's, their perception will be taken forward, and their needs would be considered and will lead towards better sustainable environment, which will also improve the society.

1.10. Scope of the Study

The study covers customers from the state of Assam in India. There are 5 divisions in Assam and from every division, one district is selected. This study tries to evaluate the perception according to demographic factors age, gender, education, etc i.e., to find if there is any relation between the demographic factor and the perception level. The research also explored some other areas related to green

marketing like the greenwashing, corporate social responsibility, environmental marketing, sustainable marketing etc. However, the study evaluates customer perception or awareness about greenwashing and find out the relation between greenwashing and the organisation's credibility.

1.11. Statement of the problem

The customer's dynamic shift towards sustainability and environmental preservation has resulted in significant adjustments to marketing tactics. The focus of marketers is on creating environmentally friendly products and promoting them using sustainable green marketing techniques. The development of green marketing strategies and the move towards environmental protection have sparked improvements in marketing techniques worldwide, including in India. There is a need to explore the perception of customers regarding these green marketing practices that are employed by marketers as it would help to understand customer behaviour while making a purchase decision. The advent of sustainable green marketing practices and their evolution over time, has brought into force the effect of greenwashing, which refers to the process of business firms making false or misleading information to customers showing that they are concerned about environment, as customers have relatively shifted their preference towards green products. The effect of green washing is becoming more and more evident in today's business world and there is a need to study the awareness of customer towards the effect of greenwashing as it would help the customer to differentiate between genuine green marketing practices and green marketing practices that are just greenwashing.

The state of Assam is tormented with several environmental issues which are air pollution, soil pollution, and water pollution due to the relative exploitation of the environment by industries. There is a need to reduce pollution and its harmful effects on environment. The state of Assam presents a unique opportunity for the growth of green entrepreneurs which would not only help to protect the environment but will also lead to sustainable development of the region.

1.12. Research Objectives:

The study has been carried out to achieve the following objectives:

1. To study the demographic profile of the respondents and their relationship with perception towards green marketing mix.

2. To assess the different components of green marketing mix and how they affect customers' intentions to purchase green products.

3. To examine the relationship between customers' perception of green marketing and their environmental concerns.

4. To determine the impact of greenwashing on customer green purchase intention in the presence of environmental concern as a mediator.

5. To provide recommendations on how stakeholders could benefit from green marketing initiatives towards sustainability and also recommend a policy framework for checking the use of greenwash.

1.13. Hypotheses

A research hypothesis is a scenario that is presented as a likely result or an explanation for a certain circumstance or aspect of a phenomenon. To the study's research questions, they offer potential and likely solutions. A hypothesis is a "tentative statement regarding an association between two or more variables as specified by the theoretical framework or the analytical model," according to the definition given. They are declarative in character and are testable empirically. Research topics are further spawned by the theoretical framework or study objectives, which are determined by challenges in marketing research. After carefully considering the study questions and objectives, hypothesis are developed analytically. Null hypothesis and alternative hypothesis are the two different sorts of hypothesis. The term "null hypothesis" refers to a hypothesis that holds that the

variables do not differ or have any special relationship. To put it another way, the null hypothesis said that if any difference between the variables arises as a result of sampling error, it will not be statistically significant. An alternate hypothesis is one that claims that a difference predicted to occur between two groups really does so. To verify the relationship among the variables picked for the study, the researcher has established a few hypotheses. The study has been carried out to test the following hypotheses;

H_1: There is a significant relationship between demographic variables and perception towards green marketing mix.

H_1a: There is a significant relationship between gender and the perception towards green product, green price, green place and green promotion

H_1b: There is a significant relationship between age and perception towards green product, green price, green place and green promotion.

H_1c: There is a significant relationship between occupation and perception towards green product, green price, green place and green promotion.

H_1d: There is a significant relationship between education and perception towards green product, green price, green place and green promotion.

H_1e: There is a significant relationship between income and perception towards green product, green price, green place and green promotion.

H_2: There is a significant relationship between green marketing mix and customer green product purchase intention.

H_2a: There is a significant relationship between green product and customer green product purchase intention.

H_2b: There is a significant relationship between green price and customer green product purchase intention.

H_2c: There is a significant relationship between green place and customer green product purchase intention.

H_2d: There is a significant relationship between green promotion and customer green product purchase intention.

H_3: There is a significant relationship between customers' perception of green marketing mix and their environmental concern.

H_3a: There is a significant relationship between customers' perception of green product and their environmental concern.

H_3b: There is a significant relationship between customers' perception of green price and their environmental concern.

H_3c: There is a significant relationship between customers' perception of green place and their environmental concern.

H_3d: There is a significant relationship between customers' perception of green promotion and their environmental concern

H_4: Greenwashing has a significant impact on customer green purchase intention in the presence of environmental concern as a mediator.

H_4a: Greenwashing has a significant negative impact on green purchase intention.

H_4b: Greenwashing has a significant positive impact on environmental concern.

H_4c: Environmental concern has a significant negative impact on green purchase intention.

H_4d: Environmental concern has a significant mediating impact on the relationship between green-washing and green purchasing intention.

1.14. Research Methodology

This part of the thesis covers the sampling framework, sampling design, research instrument (questionnaire), statistical tools and techniques used to test the research hypotheses.

1.14.1. Type of Study

A descriptive and explanatory approaches have been used to uncover and explain the perception towards green marketing practices. The descriptive approach provides a snapshot of the current situation and describes various characteristics of the variables and provide valuable insights. Whereas, the explanatory approach attempts to explain why a phenomenon occurs and tries to identify the factors behind it. In this quantitative study, the sample was taken from the target population, and statistical analyses were performed on them. Required data were gathered using field surveys due to their distinguishing features of being incredibly cost-effective, easy targeting and potential to gather large amounts of data. A well-structured questionnaire was supplied to the target respondents. To cater to linguistic biases, the

questionnaire was circulated both in English and the local Assamese language. Such surveys enable to collect data that are true representative of the population and allow for quantitative analysis using inferential and descriptive statistics.

1.14.2. Population of the Study

The target population under the purview of this study is people who have some knowledge on green marketing from Assam, due to the non-availability of any comprehensive list of the people having knowledge about green marketing. It has been tried to make sure that a sample, a true representative of the target population has been used to understand the perception of customers regarding green marketing, greenwashing, and their environmental concerns.

1.14.3. Sampling Framework

It is a list of the intended target population out of which a sample is drawn. In this study, the frame is obtained by listing the household in the selected city area to identify the people having some knowledge about green marketing and who agrees to be a part of the survey.

1.14.4. Sampling Method/ Techniques

In this study, a multi-stage sampling approach has been employed which initiates with purposive sampling followed by random sampling approach. For administrative purposes, the province of Assam has been partitioned into five divisions based on geographic area and population. This division has been adopted as five level stratification for the study. The administrative divisions (stratification for this research) are North Assam, Lower Assam, Central Assam, Upper Assam, and Barak Valley. Using administrative divisions as strata for the study is an assurance of proportionate representation of the population within the sample, which increases the likelihood that the sample will be true representative of the entire population. Within each of the strata, there were many districts representing the division. Based on purposive sampling method, one district with the highest population from each of the divisions has been selected for the study constituting Sonitpur from North Assam,

Barpeta from Lower Assam, Nagaon from Central Assam, Dibrugarh from Upper Assam, and Cachar from Barak Valley.

After forming strata and determining the districts from each of the divisions of Assam, from each district, locations within the district the city area where there are more intensive environmental activities were chosen purposively namely Tezpur, Barpeta, Nagaon, Dibrugarh and Silchar. The sample size is determined, by using the sample proportion method given by Malhotra and Dash (2011). So, the desired sample for the study was 385. While determining the number of records from each location, the population of each location was accounted and records were collected in the proportion to entire population (Table 1.1).

$$\boldsymbol{n = \frac{\pi(1-\pi)Z^2}{D^2}}$$

Where,

n- Sample size

$\boldsymbol{\pi}$ = Sample Proportion (0.5) producing maximum possible population variance or $\boldsymbol{\pi}$(1- $\boldsymbol{\pi}$)

$\mathbf{Z^2}$ - Z value at 95% confidence interval

D - Level of precision supposed to be ± 0.05

$$\boldsymbol{n = \frac{\pi(1-\pi)Z^2}{D^2}}$$

$$\boldsymbol{n = \frac{(0.5)(1-0.5)(1.96)^2}{(0.05)^2}}$$

= 384.16 or 385

Table 1.1: Population and Sample of the Study

Divisions	Districts	Location (City)	Percentage of number of populations	Population included in the study (Designated Quota)
North Assam	Sonitpur	Tezpur	13.4	52
Lower Assam	Barpeta	Barpeta	7.6	30
Central Assam	Nagaon	Nagaon	20.9	80
Upper Assam	Dibrugarh	Dibrugarh	27.4	105
Barak Valley	Cachar	Silchar	30.7	118
Total			100	385

Source: *Author's Calculation*

Once, strata, district and locations within the district were identified and quota was assigned to each location, intended respondents were targeted randomly whoever aged above 18 years. To draw the sample randomly random table was used i.e., using a list of random number. Each household from the strata were assigned random numbers from 1 to N. Since the sample size is in two digits in each stratum, two-digit numbers were selected from the random number table. They were supplied questionnaire in desired language using the structured questionnaire. In total 385 respondents were targeted according to the desired sample size. After data quality check and cleaning process, only 353 were found suitable for further analysis and reporting.

1.14.5. Primary data collection

The primary objective of the research was to gather primary data. Data from the target respondents have been collected using a survey method. Using a self-

administrated survey, 385 respondents from the aforementioned districts provided were used for data collection. The primary way for gathering data was through surveys. A structured questionnaire was created to gather first-hand information.

Demographic profile of respondent: In the Questionnaire the first part consists of demographic data of the respondent i.e., name, age, gender, district, educational qualification, occupation and monthly income. These questions will help to know the demographics.

Green marketing mix dimension perception and green product purchase intention: This part of the questionnaire consist of 4 sub parts representing each dimension of green marketing like green product, green price, green place and green promotion, and there is another part for customer green purchase intention. These comments were rated on a five-point Likert scale: strongly agree (1), agree (2), neutral (3), disagree (4), strongly disagree (5). These statements are being tested in order to evaluate the impact of various green marketing dimension on customer green purchase intention. The statements were derived from Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Rezai et al. (2012) and Chiu et al. (2012).

Greenwashing perception and green purchase intention: In this section customer perception regarding greenwashing is being evaluated and how customer's green purchase intention gets affected due to greenwashing practices followed by the companies. This section was used to evaluate the impact of greenwashing on customer green purchase intention in presence of environmental concern as a mediator. These comments were rated on a five-point Likert scale: strongly agree (1), agree (2), neutral (3), disagree (4), strongly disagree (5). The statements were derived from Manvi Khandelwal & Ashok Sharma (2019), Braga Junior (2018)**,** Chen, Y.S.; Chang, C.H (2012), Chen (2016), Alsmadi (2007).

Environmental concern: This part of the questionnaire consists of statements related to the perception of customers towards environmental concern and issues. And this has been used as a mediator between greenwashing and green purchase intention to evaluate if greenwashing effects directly or indirectly towards customer green purchase intention. These comments were rated on a five-point

Likert scale: strongly agree (1), agree (2), neutral (3), disagree (4), strongly disagree (5). The statements were derived from Alsmadi (2007), Dunlap et.al (2000) his NEP (New Environmental Paradigm) has been used.

Secondary data collection:

To fully comprehend theories of customer behaviour, secondary sources were also used. To learn about the most recent advancements in the field of customer behaviour, the researcher visited numerous libraries and used databases online. To gather data on customer behaviour trends, a wide range of national and international journals, newsletters, magazines, and research papers were consulted.

1.14.6. Tools for data collection and analysis:

Questionnaire: A survey method was utilised to gather primary data, and the instrument of data collection was a self-administered questionnaire. The questionnaire asks a variety of questions to gauge how concerned customers are about the environment, green marketing, and greenwashing. It is separated into four main categories for convenience (see to Appendix-I for questionnaire). The statements ranged from strongly agree to strongly disagree, and respondents were asked to indicate their level of agreement.

Point biserial: A specific form of Pearson correlation called point biserial correlation looks at the connection between a dichotomous variable and a metric variable.

Spearman correlation: The Spearman correlation test, like the Pearson test, looks at if two variables are associated or not. Because Spearman's test employs ranks rather than assuming normality, it may be used to examine data at both the ordinal level and the continuous level.

Factor analysis: A method of data reduction is factor analysis. A huge number of variables are reduced or summarised by component analysis into a smaller number of factors, which are then made up of the original set of variables. Factor analysis is a technique for determining if several important variables are connected to fewer, unobservable components. This is accomplished by categorizing variables

depending on how closely they correlate with one another. The components that are retrieved throughout the process are the latent variables, whereas the starting variables are the manifest variables/observed variables. Using principal component analysis, the components were extracted. Rotating the matrices can increase the interoperability of the factors. The orthogonal rotation varimax was used with the assumption that each factor existed independently of the others. The suitability of the data for factor analysis was assessed using Bartlett's Test of Sphericity and the KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy. In the KMO test of sampling adequacy, the magnitude of the observed correlation coefficients is compared to the magnitude of the partial correlation coefficients. Factor analysis was employed in this study to minimise the number of elements in the green marketing mix that influence customers' intentions to purchase green products and environmental concern of customers.

Multiple regression analysis: The inter-correlations between all the variables included in a multiple regression analysis are taken into consideration. The relationships between the predictor scores are also taken into consideration by this technique (Cohen & Swerdlik, 2002). This approach is used to ascertain if the independent variable green marketing mix will account for variations in green product purchase intention and environmental concern.

Structural equation modelling: An approach to analyse multivariate data that examines the structural link between two or more variables is known as a structural equation model. Combining multiple regression analysis and confirmatory factor analysis makes up this method. Latent constructs and measurable variables are frequently analysed using this method. This technique was utilised to examine the effects of greenwashing and on green purchase intention with a mediator variable environmental concern.

Mediation analysis: This analysis is used to ascertain if there is a presence of mediating variable which may moderate the impact of the independent variable on the dependent variable. Mediation analysis involves a set of causal hypotheses. Initial variable may influence an outcome variable through a mediating variable. When the

mediator variable partially or completely transmits the influence of the independent variable on the dependent variable, mediation has occurred. The study employed mediation analysis to investigate if customer environmental concerns act as a mediating factor in the link between greenwashing and green purchasing intention.

1.15. Limitation of the Study:

The present study has certain limitations as follows:

1) The study is confined to only five districts of Assam from each of the division having highest population. Hence the results cannot be generalised to other districts of Assam as there may be variation in their perception**.**

2) There are additional elements that can affect and influence how customers perceive green marketing; the current study solely looks at demographic and their environmental concern and greenwashing.

3) This study considers an overall view regarding the perception instead of any specific customers like FMCG customers or other criteria.

1.16. Chapter outline

Chapter 1: Introduction

The introduction of green marketing, evolution of green marketing, various green marketing mix, greenwashing and drivers of greenwashing, and customer perception are covered in this chapter, along with the definition of keywords, literature review, research gap, statement of the problem, significance and scope of the study, objective, hypothesis, research design, data analysis, study limitations, and chapter outline of the thesis.

Chapter 2: Socio-Demographic and Perception Towards Green Marketing

In this chapter the demographic profile of the respondents are discussed. Additionally, how the demographics of the respondents has association with green product, green price, green place and green promotion are evaluated and analysed.

Chapter 3: Green Marketing Mix and Green Product Purchase Intention

In this chapter the green marketing mix i.e., green product, green price, green place and green promotion are studied in basis of green product purchase intention. The relationship between perception of green marketing mix of the customers and their green product purchase intention were analysed.

Chapter 4: Green Marketing Mix and Environmental Concern

In this chapter the green marketing mix were discussed in relation to environmental concern of the customers. The relationship between perception green marketing mix of the customer and their perception towards environmental concern were analysed.

Chapter 5: Greenwashing Perception and Green Purchase Intention: Environmental Concern as Mediator.

In this chapter greenwashing was discussed in relation to purchase intention and environmental concern. SEM analysis was used to see the relationship between the greenwashing perception and their purchase intention with the mediator and mediation analysis was done to analyse the effect of mediator on the relationship between greenwashing perception and green purchase intention.

Chapter 6: Summary of Findings and Suggestions

The summary of findings is presented with an effort to support it with the logical inferences from the earlier chapters. On the basis of the results, recommendations were given for various groups, and this chapter also underlined the need for future study.

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Chapter - 2

Socio-Demographic Profile and Perception towards Green Marketing

2.1. Introduction

This chapter discusses the demographic characteristics of the state of Assam in brief and examine the demographic profile of the respondents and further analysed how the demographic profile of the respondents has significant relationship with green product, green price, green place and green promotion.

2.2. Demographic characteristics of Assam

Assam is a northeastern state in India that has the largest population and the second largest area among northeastern states. A total of 78,438 km2 (30,285 sq miles) of area are covered by Assam. The state is bordered by Bhutan and the state of Arunachal Pradesh in northern side, Nagaland, Manipur and Arunachal Pradesh in the eastern side, Meghalaya, Tripura, Mizoram and Bangladesh on the southern side and West Bengal in the western side. Approximately 3.12 crore people live in Assam, based on the 2011 Census. Assam, therefore, accounts for 2.58 percent of India's population in 2011. Among the 31,205,576 people living in Assam, 15,939,443 are males while 15,266,133 are females. Large scale migration was attributed to the state's high population in most of the 20th century. However, in the previous ten years, the variance has decreased suggesting that this tendency has reversed (Assam Human Development Report, 2003). Even in normal times, migration continues to be a troubling and frightening problem in the state (Economic Survey 6 of India, 2009–10). Assam had unfavourable gender ratio differences before the start of the 20th century, but in the last few years, this tendency has improved, with 932 females for every 1000 men in the state.

2.3. Demographic profile of the respondents

The respondents' profiles with regard to gender, age, city, educational level, income and occupation of the respondents are covered in this part.

2.3.1. Gender of the respondents

Here, the gender of the respondents has been identified, the below table 2.1 represents the number of male and female respondents of the study.

Table 2.1: Gender of the respondents

Gender	Frequency	Percent	Cumulative Percent
Female	178	50.4	50.4
Male	175	49.6	100.0
Total	353	100.0	100.0

Source: *Field Survey*

From the above table 2.1, it can be revealed that majority of the respondents are female which accounts for 50.4% of the respondents while male respondents accounts for 49.6% of the respondents.

2.3.2. Age of the respondents

Here, the age of the respondents is classified into five different groups i.e., 18-25, 26-35, 36-45, 46-55 and 56 and above. The table 2.2 below represents the age of the respondents.

Table 2.2: Age of the respondents

Age	Frequency	Percent	Cumulative Percent
18 -25	189	53.5	53.5
26 - 35	114	32.3	85.8
36 - 45	45	12.7	98.6
46 - 55	5	1.4	100.0
56 and above	0	0.0	0.0
Total	353	100.0	100.0

Source: *Field Survey*

From the above table 2.2, it is revealed that the majority of the respondents are in the age group between 18-25 years which accounts for 53.5% of the total respondents. The second highest are the respondents belonging to the age group between 26-35 years which accounts for 32.3% of the total respondents. The respondents belonging to the age group between 36 – 45 years are in the third category which accounts for 12.7% of the total respondents followed by respondents in the age group between 45-55 years which accounts for the least percentage 1.4% of the total respondents while there were no respondents from the age group above 55 years.

2.3.3. Cities of the respondents

Since the study has considered five districts of Assam with the highest population representing the five different administrative division namely North Assam, Lower Assam, Central Assam, Upper Assam, and Barak Valley, this section analysed the districts of the respondents from each of the administrative division viz Dibrugarh, Nagaon, Sonitpur, Cachar and Barpeta. From the district further cities were considered where there were more environmental activities. The table 2.3 below represents the number of respondents from each cities from the selected districts.

Table 2.3: Cities of the respondents

Cities	Frequency	Percent	Cumulative Percent
Tezpur	62	17.6	17.6
Barpeta	49	13.9	31.5
Nagaon	71	20.1	51.6
Dibrugarh	82	23.2	74.8
Silchar	89	25.2	100
Total	353	100.0	100.0

Source: *Field Survey*

From the above table 2.3, it is revealed that the majority of the respondents are from Silchar with 89 respondents and which constitutes 25.2% of the total respondents. The second highest are the respondents belonging to Dibrugarh which accounts for 23.2% of the total respondents. The respondents belonging to Nagaon are in the third category which accounts for 20.1% of the total respondents followed by respondents from Tezpur which accounts for 17.6 % of the respondents and the least percentage 13.9% of the total respondents were from Barpeta.

2.3.4. Educational level of the respondents

Here, the educational level of the respondents were identified. The respondents were classified into four different educational level i.e., undergraduate, graduate, post graduate and Ph.D. The table 2.4 below represents the educational level of the respondents.

Table 2.4: Educational level of the respondents

Educational Level	Frequency	Percent	Cumulative Percent
Undergraduate	38	10.8	10.8
Graduate	143	40.5	51.3
Post Graduate	144	40.7	92.1
Ph.D.	28	7.9	100.0
Total	353	100.0	100.0

Source: *Field Survey*

From the above table 2.4, it is revealed that the majority of the respondents are Post Graduate with 144 respondents and which constitutes 40.7% of the total respondents. The second highest are the respondents belongs to graduate which accounts for 40.5% of the total respondents. The respondents with educational level of undergraduate are in the third category which accounts for 10.8% of the total

respondents followed by respondents with Ph.D. accounts for 7.9 % of the respondents.

2.3.5. Occupation of the respondents

In this section the occupation of the respondents has been identified. It has been classified into five different types of occupation including students, service, housewife, business and retired.

Table 2.5: Occupation of the respondents

Occupation	Frequency	Percent	Cumulative Percent
Students	224	63.5	100.0
Service	67	19.0	100.0
Housewife	2	.6	100.0
Business	60	17.0	100.0
Total	353	100.0	100

Source: *Field Survey*

From the above table 2.5, it is revealed that the majority of the respondents were students with 224 respondents and which constitutes 63.5% of the total respondents. The second highest are the respondents who belong to service category which accounts for 19% of the total respondents. The respondents with business as an occupation are in the third category which accounts for 17% of the total respondents followed by respondents who are housewives accounts for .6% of the respondents.

2.3.6. Income of the respondents

The income of the respondents are classified into four categories (per month) i.e., less than 20000, 21000 – 50000, 51000 – 100000 and more than 100000. The table 2.6 below represents the number of respondents from every income group.

Table 2.6: Income of the respondents

Income	Frequency	Percent	Cumulative Percent
Less than 20000	115	32.6	32.6
21000 - 50000	93	26.3	58.9
51000 - 100000	100	28.3	87.3
More than 100000	45	12.7	100.0
Total	353	100.0	100.0

Source: *Field Survey*

From the above table 2.6, it is revealed that the majority of the respondents are in the income group of less than 20,000 per month which constitutes 32.6% of the total respondents. The second highest are the respondents are in the income group of 51000 – 100000 per month which accounts for 28.3% of the total respondents. The respondents in the income group of 21000 – 50000 per month are in the third category which accounts for 26.3% of the total respondents followed by respondents with income of more than 100000 per month accounts for 12.7 % of the respondents.

2.4. Testing of hypothesis 1

A significant amount of research has been done to determine customers' desire to purchase ecologically friendly items. Makeower (2009), examined studies carried out in the 1970s on environmental behaviours and demography. The findings of the research indicate a strong demographic connection with customers' inclination to purchase environmentally friendly goods. Furthermore, the study suggests that the early 1970s study revealed values, knowledge and beliefs, needs and motivation, attitudes, and demography as factors influencing a consumer's willingness to purchase environmentally friendly goods. In order to evaluate the connection between demographic and their perception towards green marketing mix the following analysis has been undertaken in the study.

The following hypothesis has been proposed to determine the association between demographic variables and perception towards green marketing:

H_1a: There is a significant relationship between gender and the perception towards green product, green price, green place and green promotion.

H_1b: There is a significant relationship between age and perception towards green product, green price, green place and green promotion.

H_1c: There is a significant relationship between occupation and perception towards green product, green price, green place and green promotion.

H_1d: There is a significant relationship between education and perception towards green product, green price, green place and green promotion.

H_1e: There is a significant relationship between income and perception towards green product, green price, green place and green promotion.

2.4.1. Gender of the respondents and perception towards green marketing mix.

According to Baker and Ozaki (2008), gender cannot be ignored because it not only played a significant role in the psychological differences influencing green consumption but additionally as equality between genders and the disparity in social stigmatization of men and women have a significant impact on their consumption of green goods and other associated pro-environmental behaviour (Pickett-Baker and Ozaki, 2008). Based on this literature, the following hypothesis has been framed to be tested.

H_1a: There is a significant relationship between gender and their perception towards green marketing mix.

Point Biserial was used to analyse the association between the two variables. Due to the dichotomous nature of success or failure on a question, r can only be computed for two continuous variables, which is not the case in this instance. The point-biserial correlation, or r_{pb}, is a specific case of the Pearson correlation that is used to examine the relationship between a dichotomous and a continuous variable. This correlation is distinct from the biserial correlation, which is applied when one of

the variables is intentionally dichotomized. Although the r_{pb} and r are theoretically similar, the r_{pb} includes more understandable formulas that provide light on what makes a "good" query (LeBlanc et al. 2017).

Table 2.7: Gender of the respondents and green marketing mix

Variables	Gender	N	Mean	Std. Deviation
Green Product	Female	178	2.033	0.8411
	Male	175	2.048	0.8507
Green Price	Female	178	2.284	0.7079
	Male	175	2.216	0.7534
Green Place	Female	178	2.284	0.7079
	Male	175	2.216	0.7534
Green Promotion	Female	178	2.264	0.7684
	Male	175	2.181	0.7941

Source: *Field Survey*

Table 2.8: Pearson Correlation test

		Gender	Green Product	Green Price	Green Place	Green Promotion
Gender	Pearson Correlation	1				
Green Product	Pearson Correlation	.009	1			
	Sig. (2-tailed)	.864				
Green Price	Pearson Correlation	-.047	.791**	1		
	Sig. (2-tailed)	.381	.000			
Green Place	Pearson Correlation	-.047	.791**	1.000**	1	
	Sig. (2-tailed)	.381	.000	0.000		
Green Promotion	Pearson Correlation	-.053	.768**	.767**	.767**	1
	Sig. (2-tailed)	.316	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Source: *Author's calculation*

The average rating for green products for female is 2.033 and 2.048 for the males' respondents. In this case, it seems that males are more inclined towards green product. This finding necessitates to check if gender and inclination towards green product are correlated. Since gender is dichotomous in nature while the scores for green product were transformed into interval scale, a point biserial correlation was

tested. A very weak correlation (r_{pb}= .009, p = .864) was found between gender and preference towards green products. Since p-value is very high when compared with the level of significance (>0.5), the null hypothesis was accepted and the alternate hypothesis was rejected. Thus, there is no significant relationship between gender and green products.

The average rating for green price for females is 2.284 and 2.216 for males, here the female has a higher mean score. In this case, it seems that females are more inclined towards green price. The relationship of gender with green price (r_{pb}= -.047, p = .381) depicts that the relationship is found not significant. Thus, the null hypothesis was accepted and the alternate hypothesis was rejected. Therefore, there is no significant relationship between gender and green price.

The average rating for green place for female is 2.284 and 2.216 for male respondents where the female has higher mean score. In this case, it seems that females are more inclined towards green place. The relationship of gender with green place (r_{pb}= -.047, p = .381) depicts that the relationship is found not significant. Thus, the null hypothesis can be accepted and the alternate hypothesis was rejected. Therefore, there is no significant relationship between gender and green place.

The average rating for green promotion among female is 2.264 while males scored at 2.181, here the female has higher mean score. In this case, it seems that females are more inclined towards green promotion. The relationship of gender with green promotion (r_{pb}= -.053, p = .316) depicts that the relationship is found not significant. Thus, the null hypothesis was accepted and the alternate hypothesis was rejected. Therefore, there is no significant relationship between gender and perception towards green promotion.

2.4.2. Age of the respondents and perception towards green marketing mix.

H_1b: There is a significant relationship between age and perception towards green product, green price, green place and green promotion.

Table 2.9: Spearman Correlation of Age of Respondents

Spearman's rho		Age	Green Product	Green Price	Green Place	Green Promotion
Age	Correlation Coefficient	1.000				
Green Product	Correlation Coefficient	-.127	1.000			
	Sig. (2-tailed)	.170				
Green Price	Correlation Coefficient	-.072	.556**	1.000		
	Sig. (2-tailed)	.180	.000			
Green Place	Correlation Coefficient	-.072	.556**	1.000**	1.000	
	Sig. (2-tailed)	.180	.000			
Green Promotion	Correlation Coefficient	-.068	.450**	.534**	.534**	1.000
	Sig. (2-tailed)	.200	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Source: *Author's calculation*

Spearman Rank Correlation was computed between age and perception towards green product, green price, green place and green promotion and the results in Table 2.4 revealed that there is a weak and negative correlation between age and their perception towards green products (r_s = -.127, p = .170), the p-value is insignificant. The correlation is negative it can be concluded that the younger age respondents have a positive response. Thus, the null hypothesis was accepted and the alternate hypothesis was rejected. Therefore, there is no significant relationship between age and perception towards green products.

The relationship between age and green price is negatively correlated where the (r_s = -.072, p = .180) there is no significant relationship between age and green price as the p value is not significant. Thus, the null hypothesis can be accepted and there is no significant relationship between age and green price.

The relationship between age and green place is negatively correlated where the (r_s = -.072, p = .180) there is no significant relationship between age and green place as the p value is not significant. Thus, the null hypothesis was accepted and there is no significant relationship between age and green place.

The relationship between age and green promotion is negatively correlated where the (r_s = -.068, p = .200) there is no significant relationship between age and green promotion as the p-value is not significant. Thus, the null hypothesis was accepted and there is no significant relationship between age and green promotion.

2.4.3. Occupation of the respondents and perception towards green marketing mix.

H_1c: There is a significant relationship between occupation and perception towards green product, green price, green place and green promotion.

Table 2.10: Descriptives of Occupation of the Respondents

Occupation	Frequency	Percent
Students	224	63.5
Service	67	19
Housewives	2	0.6
Business	60	17
Total	353	100

Source: *Field Survey*

Table 2.11: Pearson Correlation of Occupation of the Respondents

Occupation	Correlation	Green Product	Green Price	Green Place	Green Promotion
Student	Pearson Correlation	0.082	0.054	0.054	.143
	Sig. (2-tailed)	0.123	0.311	0.311	0.137
Service	Pearson Correlation	-0.085	-0.069	-0.069	-.116
	Sig. (2-tailed)	0.112	0.195	0.195	0.129
Housewives	Pearson Correlation	-0.039	0.005	0.005	-0.051
	Sig. (2-tailed)	0.461	0.923	0.923	0.343
Business	Pearson Correlation	-0.009	0.002	0.002	-0.052
	Sig. (2-tailed)	0.865	0.973	0.973	0.332

**. Correlation is significant at the 0.01 level (2-tailed).

Source: *Author's calculation*

A Pearson Correlation was run to determine the relationship between occupations and green product, green price, green place and green promotion.

The respondents who are students are positively correlated with the green products, green price, green place and green promotion respectively (r_{pb} = 0.082, r_{pb} = 0.054, r_{pb} = 0.054, r_{pb} =0.143) where green promotion of student is significantly correlated as (p = .007) at 1 %, and green product, green price and green place is not significant (p = 0.123, p = 0.311, p = 0.311 and p = 0.137). In this regard, the null hypothesis can be accepted for green product, green price, green place and green promotion as there is no significant relationship between students and green product, green price, green place and green promotion.

The respondents who are in service are negatively correlated with the green products, green price, green place and green promotion respectively (r_{pb} = -0.085, r_{pb} = -0.069, r_{pb}= -0.069, r_{pb} =0-.116) green product, green price, green place and green promotion is not significant (p = 0.112, p = 0.195, p = 0.195, and (p = 0.129)). In this regard, the null hypothesis was accepted for green product, green price, green place and green promotion as there is no significant relationship between service as occupation and green product, green price, green place and green promotion.

Housewives has only 2 respondents (.6%) and there was a negative correlation value with the perception of green product, green promotion where (r_{pb} = -0.039, r_{pb} = -0.051), whereas green price and green place show a weak but positive relationship (r_{pb} = 0.005, r_{pb} = 0.005). Since p values are higher than the significance level (0.05) (p= 0.461, p = 0.923, p = 0.923 and p = 0.343), the null hypothesis was accepted and the alternate hypothesis was rejected. Hence, it can be concluded that there is no significant relationship between perception of green products, green price, green place and green promotion and housewives as occupation.

Respondents who are in business (17%) and their relationship with green product and green promotion is negatively correlated (r_{pb} = -0.009, r_{pb} = -0.052) and green price and green place are found to be weak but positive relationship (r_{pb} = 0.002, r_{pb} = 0.002), since the p values are higher than the significance level (0.05) (p = 0.865, p = 0.973, p = 0.973 and p = 0.332), the null hypothesis was accepted and the alternate hypothesis was rejected. Hence, it can be concluded that there is no significant relationship between perception of green products, green price, green place and green promotion and businessman as occupation.

2.4.4. Educational level of the respondents and perception towards green marketing mix.

H_1d: There is a significant relationship between education and perception towards green product, green price, green place and green promotion.

Table 2.12: Spearman Correlation of Educational Level of Respondents

Spearman's rho		Educational Level	Green Product	Green Price	Green Place	Green Promotion
Educational Level	Correlation Coefficient	1				
Green Product	Correlation Coefficient	-0.001	1			
	Sig. (2-tailed)	0.981				
Green Price	Correlation Coefficient	0.017	.556**	1		
	Sig. (2-tailed)	0.746	.000			
Green Place	Correlation Coefficient	0.017	.556**	1.000**	1	
	Sig. (2-tailed)	0.746	.000			
Green Promotion	Correlation Coefficient	-0.026	.450**	.534**	.534**	1
	Sig. (2-tailed)	0.623	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Source: *Author's calculation*

Spearman Rank Correlation was computed between education and perception towards green product, green price, green place and green promotion and the results in Table 2.5 revealed that there is a negative correlation between education and their perception towards green products (r_s = -0.001, p = .981), the p-value is insignificant. Thus, the null hypothesis for education and green product was accepted and it can be concluded that there is no significant relationship between education qualification and perception towards green product.

The relationship between education and green price has been tested and the values are found insignificant (r_s = 0.017, p = .746). Thus, the null hypothesis was accepted and the alternate hypothesis was rejected. Hence, there is no significant relationship between education and green price.

The relationship between education and green place are shown with the value (r_s = 0.017, p = .746) but there is no significant relationship between education and green price as the p value is not significant. Thus, the null hypothesis was accepted and there is no significant relationship between education qualification and green place.

The relationship between education and perception towards green promotion are negatively correlated (r_s = -0.026, p = .623), the p-value is insignificant. Thus, the null hypothesis was accepted and there is no significant relationship between education qualification and perception towards green promotion.

2.4.5. Income of the respondents and perception towards green marketing mix.

H_1e: There is a significant relationship between income and perception towards green product, green price, green place and green promotion.

Table 2.13: Spearman Correlation of Income of the Respondents

Spearman's rho		Income	Green Product	Green Price	Green Place	Green Promotion
Income	Correlation Coefficient	1				
Green Product	Correlation Coefficient	-0.09	1			
	Sig. (2-tailed)	0.09				
Green Price	Correlation Coefficient	0.081	.556**	1		
	Sig. (2-tailed)	0.13	0			
Green Place	Correlation Coefficient	0.081	.556**	1.000**	1	
	Sig. (2-tailed)	0.13	0			
Green Promotion	Correlation Coefficient	0.015	.450**	.534**	.534**	1
	Sig. (2-tailed)	0.778	0	0	0	

Source: *Author's calculation*

Spearman Rank Correlation was computed between income and perception towards green product, green price, green place and green promotion and the results in Table 2.8revealed that there is a weak and negative correlation between income and their perception towards green products which indicates as the income increases the need for green product decreases (r_s = -0.09, p = 0.09), the p-value is not significant. Thus, the null hypothesis for income and green product was accepted and there is no significant relationship between income and perception towards green product.

The relationship between income and green price was analysed and come out with value (r_s = 0.081, p = 0.13) where the p-value is not significant. Thus, the null hypothesis was accepted and there is no significant relationship between income and perception towards green price.

The relationship between income and green place shows no correlation (r_s = 0.081, p = 0.13), the p-value is not significant. Thus, the null hypothesis for income and green place was accepted and there is no significant relationship between income and perception towards green place.

The relationship between income and green promotion shows no correlation (r_s = 0.015, p = 0.778) where the p-value is not significant. Thus, the null hypothesis for income and green promotion was accepted and there is no significant relationship between income and perception towards green promotion.

Table 2.14: Summary of the hypotheses results

Hypotheses		**Results**
H_1a	There is a significant relationship between gender and the perception towards green product, green price, green place and green promotion.	Not Supported
H_1b	There is a significant relationship between age and perception towards green product, green price, green place and green promotion.	Not Supported
H_1c	There is a significant relationship between occupation and perception towards green product, green price, green place and green promotion.	Not Supported
H_1d	There is a significant relationship between education and perception towards green product, green price, green place and green promotion.	Not Supported
H_1e	There is a significant relationship between income and perception towards green product, green price, green place and green promotion.	Not Supported

2.5. Conclusion:

It has been observed that female respondents are more than the male respondents, and it can be seen that most of the respondents were from the age group of 18 – 25 with 189 respondents. Most of the respondents were from 20,000 – 50,000 income group and additionally 143 respondents were graduate and 144 respondents were post graduate indicating most of the respondents had a good educational qualification.

It can be seen that the relationship between gender and green marketing components were not significant, but it revealed that females are more inclined towards green price, green place and green promotion and male are more inclined towards green products. Robert, (1996) in his study demonstrated the influence of gender on eco-friendly consumer behaviour, the findings revealed that women performed higher in ecologically conscious consumer behaviour.

Additionally, it is revealed that age of the respondents were not significant but the young respondents were more inclined towards green products as the correlation was negative. These results are similar to a study conducted by Chan, (1996) on the purchasing habits of female grocery shoppers in Canada and Hong Kong discovered that younger customers were inclined to environmentally friendly items. It was also revealed that as the educational qualification of the respondents increases, they are more urge to pay more for green products and they are more concerned about availability of green products. Chan, (1996) in his study also revealed that more educated consumers are more inclined towards environmentally friendly products.

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Chapter - 3

Green Marketing Mix and Green Product Purchase Intention

3.1. Introduction

In recent years, both academics and businesses have been more interested in green marketing. Going green is advantageous since consumer marketing now is very different from that of 20 years ago. The benefits of environmentally friendly products are well known to today's consumers, and conserving the environment is among their top concerns. Conventional marketing will not work under these conditions. As a result, businesses must actively market themselves and their products as ecologically friendly. Furthermore, this raises income for the business (Ottman J., 1998). The dearth of scholarly research on environmental or green marketing is one of the primary problems facing the area of green marketing. Ansar, (2013) is one of the few researchers who studied the green marketing mix and purchasing intention, and he evaluated the three components of the green marketing mix: ecological packaging, environmental promotion, and environmental cost. Wanninayake and Randiwela (2008), in contrast, conducted research on the topics of "green product, green packaging, green place, and green promotion".The primary goal is to investigate how green marketing dimensions like green product, green price, green place, and green promotion impact the customer green product purchase intention. This goal will make it easier to recognize which green marketing dimension influences more towards consumer behaviour. There are five variables where green product, green place, green price and green promotion are independent variables which were assumed to have positive influence on purchase intention which is the dependent variable.

3.2. Green marketing mix

3.2.1. Green Product

Green products are less damaging to human health and to the environment. According to Srivastava (2007), the evolution of green products is a result of growing worries about issues such as global warming, local and global contamination, depleting natural resources, and garbage overflow. Consumers are adamant about buying eco-friendly items because they are concerned about the environment (Soonthonsmai, 2007). Green customers are those who are aware of and

concerned about environmental issues. Green or sustainable consumption is a broad shift in consumer behaviour aimed at minimizing the environmental effect of consumption. Natural concern products or neighbourly products are often defined as those made with the least amount of raw materials possible and with the least amount of negative ecological effects over the course of their whole life cycles. The product is the centre of attention for the marketing mix and the most important component of the entire green marketing strategy. In any event, it's critical to understand that a product's environmental impact extends beyond its primary component and includes everything associated with it, such as the raw materials used, the manufacturing process, the product packaging, etc. (Ansar, 2013). Using the five principles in product production may assist lessen a product's after-use negative environmental consequences. The five 5Rs are: reuse, reconditioning, repair, remanufacturing, and recycling (Peattie and Crane, 2005). Companies started producing environmentally friendly goods and implementing green product policies when a product's hazardous content started to influence customers' decisions to buy.

The most crucial component of the entire green marketing strategy and the centre of the green marketing mix is the product. However, it is important to keep in mind that a green product includes all of the product's components, including the materials utilized, the manufacturing process, the product's packaging, etc (Fan and Zeng, 2011). In particular, Hayat et al., (2019) defined four common categories of green products, including those made from materials that are recycled, reusable, having little negative environmental effects, and have eco-friendly packaging. Basically, there are a few different approaches to create green products, either by improving the current standard items or by creating an entirely new one. Particularly, the former implies that marketers transform common place products into greener ones by re-design and the addition of green attributes. By substituting ecologically friendly substances for some conventional components, this advancement might be put into practice (Sarkar et al., 2015). Green goods are intended to be produced, regardless of the techniques used, by enabling the use of renewable resources with the aim of bringing benefits to nature while maintaining the full functionality of the products for the consumers (Sarkar et al., 2015). The packaging of a product comes

in typically reflects how "green" it is perceived to be. In fact, according to several research, the packaging is an essential component of the core product (Kotler & Bliemel,1999; Schaltegger et al., 2017). To be more precise, packaging provides buyers with information about the characteristics of the good as well as barcodes that are machine read-only to make the inquiry process easier. From the above literature the following hypothesis has been framed to be tested;

H_2a: There is a significant impact of green product on customer green product purchase intention.

3.2.2. Green Price

The price of the product is determined by its cost. It is an essential component of the marketing mix. The majority of consumers will only increase their spending if they think the product is worth more (Eric, 2007). This value might be in regards to enhanced taste, design, utility, or aesthetics (Sharma, 2011). Environmental benefits are usually an added plus, but they also often set products apart that are similar in terms of quality and value (Singh, 2012). Green marketing needs to include each of these aspects, even if it means spending extra money (Bukhari, 2011). Green pricing takes into account the needs of people, the environment, and business in a way that ensures efficient production while safeguarding the health of communities and employees. Among other things, its worth may be raised by changing its emergence, utility, and customization (Shil, 2012). Due to the increased expenses of production and disposal procedures, green products often cost more than their non-green competitors (Solaiman et al., 2015). They also include reasonable salaries for producers. Therefore, the objective of a pricing strategy in green marketing is to integrate and balance customers' price sensitivity and ethical consciousness (Fan & Zeng, 2011).

Recycling and buying organic items are not indications that a client is prepared to spend extra. A user may be in favour of recycling or fixing durable products, but he may not be prepared to pay more (Hansla et al., 2008). If the customer's social and environmental costs are taken into account when determining the pricing and taking the consumer's willingness to pay that price into consideration,

producers will be driven to design the product in a more ecologically friendly manner. Businesses that incur these costs and pass them on to consumers run the risk of both misunderstanding client preferences and pricing more than their rivals.

It is crucial to take into account the external costs, such as the quantity of carbon emitted into the environment during the production process (Sarkar et al.,2015). In other words, the cost of pollution may now be included in the price of a product. Corporations should improve contemporary technology as part of their long-term goal to reduce pollution and, consequently, the costs associated with it. Additionally, when novel technologies are developed, product characteristics are strengthened and the life cycle of the good is extended. In addition to businesses' efforts to reduce polluting emissions, it is crucial to lower consumers' demand for environmentally unfriendly items through price policies.

There are several methods used by marketers to determine prices for green products, including premium, skimming, penetration, economy, and psychology. Each pricing approach, whether it uses cheap or high price, may, in fact, benefit the companies. As a result, marketers base their decisions on the needs of the target markets. According to Wei et al. (2014), businesses typically use pricing skimming (premium price, high profits, and low sales) or penetration pricing (low price, poor profits, and huge sales) when the product is new. The qualities of environmentally friendly products and production-related technical difficulties influence the price approach that businesses use. For instance, if the new environmental goods' qualities are distinctive and competitive in contrast to their rivals, as well as if the market's prospective demands are significant, it will be valued for its skimming pricing approach. As a result, businesses might be highly profitable, and the market for green products is quite lucrative. Otherwise, there will be new features if green products are developed from the earlier conventional ones. However, pricing is a challenge since customers will contrast the features and advantages of these two types of products. Thus, on the basis of the above literature, the following hypothesis has been proposed to be tested;

H_2b: There is a significant impact of green price on customer green product purchase intention.

3.2.3. Green Place (distribution):

According to Govender & Govender (2016), the green marketing mix approach is not complete without a green location. The rationale is that the proper distribution of goods enables businesses to reach customers and persuade them to make purchases, for example: when green items are easily and rapidly found on the market, consumers are far more inclined to purchase them. This is why consumers favour those things that can be simply and conveniently located. Gittell et al., (2015) noted in another article that supermarkets are among the greatest venues for distributing environmentally friendly goods.

Additionally, it is conceivable that businesses may work with the stakeholders to create an eco-commission via which they could improve the effectiveness of their logistics. For instance, Tesco, one of the biggest retailers in the world, is collaborating with a wide range of internationally renowned companies, like Nestle and L'Oreal, to form the Supply Chain Leadership Coalition. This alliance's goal is to make sure that the method of distribution is ecologically responsible. Overall, the transportation of businesses shows how they handle a green journey to maximise ecological issues (Sarkar et al., 2015). One of the most important responsibilities of organizations is to conserve the resources used in logistics advances in order to provide an ecological friendly physical transportation and storage (Schaltegger et al., 2003). Undoubtedly, an improper distribution might significantly harm the environment; as a result, businesses should examine the right choice of the products' transportation (Arseculeratne &Yazdanifard, 2014; Eneizan et al., 2019). Because of this, firms have a wide range of alternatives for managing good logistics, such as choosing the best packing for deliveries, figuring out how to move products back, and using scattered sites to save down on long-distance transportation (Schaltegger et al., 2003).

The recent rise of reverse logistics is another essential component of logistics. In particular, it is progress when trash and unsold or used products are returned to

producers by customers (Pokharel & Mutha, 2009). Reverse logistics' main goal is to extend the product life cycle by recycling or reproduction; as a result, it also outlines the businesses' environmental responsibilities. Therefore, reverse logistics could be a good option for manufacturers to cut down on the quantity of garbage going to landfills while also having a more cost-effective way to create more profitability through product recovery (Sarkar et al., 2015).

It goes without saying that suppliers have a significant role in the environment. In particular, suppliers are people who offer completed goods, services, and raw materials to businesses and their clients. So, managing steps towards a greener process, lowering the usage of non-renewable energy, and optimizing the use of resources and operation falls under the purview of a green provider. Additionally, it has been suggested that in addition to focusing on environmental effects, green suppliers should also examine economic and social consequences since if they do not, they will not be perceived as green (Miles &Munila, 2004, Sarkar et al., 2015). Hence, the following hypothesis has been proposed to be tested;

H_2c: There is a significant impact of green place on customer green product purchase intention.

3.2.4. Green Promotion

Sustainability pledges on a societal and environmental level are included in the promotion component of the green marketing mix (Asha, 2017). The major goal is to influence customers' purchasing decisions by enticing them to purchase goods that have favourable environmental effects (Mahmoud, 2018). It entails informing customers about the environmental commitments and initiatives undertaken by businesses. Advertising, public relations, sales promotions, and direct marketing are all examples of promotional activities (Fan & Zeng, 2011). According to Ankit and Mayur (2013), green advertising is a form of promotional messaging that may connect to the needs and goals of customers who care about the environment. According to Rahbar and Abdul Wahid (2011), the goal of green advertising is to persuade consumers to make environmentally friendly purchases while also drawing

their attention to the benefits of such behaviour for both the natural world and themselves.

Ankit & Mayur, (2013) defined green advertising as promotional messaging that may appeal to the needs and aspirations of customers who are concerned about the environment. However, firstly the connection between a product and the environment might be defined and addressed with the help of green advertising. Green advertising promotes the products, services, and business announcements that show how well-equipped businesses are to support and protect the environment. One way that green advertising could function in the market is to educate consumers and influence them to make more environmentally friendly purchasing decisions.

Second, sales promotion is defined as a group of marketing strategies intended to stimulate audience demand for a certain item or service and increase brand recognition. Numerous benefits of sales promotions have been identified in the real world. In particular, it may help companies infuse the market with new energy. Additionally, it may dramatically increase brand recognition and sales income. In addition, there are several sorts of sales promotion, including price discounts, loyalty reward programmes, bonus deals, and more (Sendpulse, 2021).

Third, social media, which is gaining popularity and favourability in current marketing strategies, incorporates cutting-edge technology platforms that promote the creation of virtual content and user interaction and exchange (Williams et al., 2014). Additionally, social media may be a very successful tool for promoting sustainability since it may assist marketers in classifying customer groups who are more environmentally conscious through the segmentation capabilities of social media platforms. Social media enables two-way connection between businesses and the public as opposed to advertising. As a consequence, businesses might have a better understanding of what customers anticipate and react to when it comes to recycling and other environmental issues (Minton et al., 2012).

Personal selling is the fourth dimension in green marketing. It mostly refers to the human connection between a seller and a consumer, during which the seller makes an effort to persuade and satisfy the customer in order to convince him to

purchase the informed items. Additionally, personal selling places more of an emphasis on creating a strong and long-lasting relationship between the salesperson or company and the customer than on achieving a commercial goal (Rajput and Vasishth, 2008). Since salesman is able to directly engage along clients and elaborate them the sophisticated information of the items, particularly the advantages and novel functions and features, personal selling is a very effective promotional technique for businesses.

Lastly, public relations (PR), according to the American Marketing Association's (2008), is a notion of communication that introduces and spreads to the audience and stakeholders the opinions, ideas, and principles of the companies in addition to their products and services by utilizing the community's influence and a range of unpaid promotional practices (Zavattaro, 2013). As unpaid actions, public relation might have beneficial or ineffective consequences on the marketplace. Positively, businesses may team up with non-profit green organisations to publicise themselves and draw in large audiences. In this situation, businesses might also easily draw customers in with newly created green product characteristics. From the above literature, the following hypothesis has been proposed to be tested.

H_2d: There is a significant impact of green promotion on customer green product purchase intention.

3.3. Green Product Purchase Intention:

Arslan and Zaman (2015) define purchase intention as "the potential for a consumer to purchase a good or service in the future". When a customer has a good buying intention, they are more likely to take real action to make a purchase, whereas a negative purchase intention prevents them from doing so. Experts are in agreement that research may utilise purchase intention as a crucial metric for evaluating consumer behaviour (Wu et al., 2011). The cost of keeping a recent client is likewise found to be less expensive than prospecting for a new one (Ihtiyar & Ahmad, 2014). The chance and inclination to prefer purchasing a product that includes eco-friendly attributes is how purchase intention for green environment items is conceptualized (Yosuf et al., 2013).

In order to determine the elements influencing consumer purchasing patterns, including purchase intentions and actual spending behaviour of green items, it is crucial to examine the green buying behaviour of green customers. According to Grob (1995), behaviour in an environmental setting is defined as acts that directly affect the ecosystem. Numerous green practises are becoming more popular. Some of these include encouraging the use of biodegradable items, recycling, conserving paper and power, limiting the use of particles, eating organic food, and so on (Gilg et al., 2005). Consumer enthusiasm for the green movement is edging increasing with time (Han et al., 2010).

According to research by Straughan and Roberts (1999), peer opinion as well as personal characteristics may have an impact on one's pro-environment and eco-friendly attitudes. According to Ajzen's Theory of Planned Behaviour (TPB), attitudes and behaviours are shaped by beliefs, this is supported by Ajzen (1991). In research conducted by Mathur et al., (2008) using theory of planned behaviour, the consumption patterns of 2nd and 3rd-generation Indians residing in the USA and India were examined. The green culture and ideals in America have a significant impact on the Indian population there, and it was determined that this had a greater impact on Indian youth than on other consumer groups.

Once again, sustainable goals like the search for healthier choices, awareness of the environment, and long-term viability influence the kind of product that consumers choose to purchase (Paul & Rana, 2012). Frequently, a shift in consumer behaviour is caused by a market trend. As a result of individual marketing behaviour, consumers are able to evaluate quality, price, value, and availability as competing commodities (Ritter et al., 2015). It is necessary to raise knowledge of green products and utilize them, which will encourage consumers to switch from conventional to green products, in order to improve an environmentally friendly way of life. According to reports, green items have a significant impact on consumers' total buying intentions. Amazingly, customers' green buying behaviour is ultimately influenced by their green product purchase intention.

3.4. Theoretical Framework:

Figure 3.1 shows the conceptual framework model that was created based on the literature research. The components of green marketing mix viz. green product, green pricing, green place, and green promotion were used as independent factors in the study with consumer purchase intention serving as the dependent variable.

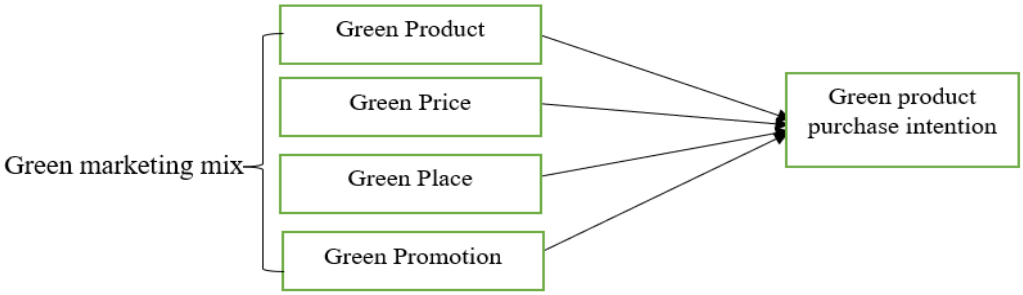

Figure 3.1: Conceptual Framework

Source: Author's own compilation

Measurement Items:

Table 3.1 provides the constructs for purchase intention and the sources from where they have been taken. The independent variable green product, green price, green place and green promotion has been adopted from Chen & Chang, (2012); Nguyen et al., (2019); Tariq, (2014); Hashem & Al- Rifai, (2011) and the dependent variable purchase intention has been adopted from Rezai et al., (2012); Chiu et al., (2012).

Table 3.1: Summary of the Constructs and their Sources

Constructs	Measuring Items	Source
Green Product	I prefer eco-friendly products over non-eco-friendly products	Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Hashem
	Eco friendly products are valuable to the society	

	Eco friendly products consumption will not harm our health	& Al-Rifai (2011)
	Eco friendly products will not create pollution in our environment	
	Purchasing eco-friendly products will contribute to sustainable future	
Green Price	Eco friendly products are highly priced	Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Hashem & Al-Rifai (2011)
	I am willing to pay more for eco-friendly products	
	The price of the products is normal	
	The benefit of green product are justified by price.	
	For premium green products the price will also be premium	
Green Place	Green products are easily available	Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Hashem & Al-Rifai (2011)
	I don't need to go a long way for purchasing of green products	
	Environmentally friendly products are offered by prestigious vendors/ marketers.	
	The company (x) is eager to work with agents that are environmentally conscious.	
	The company's have done proper distribution of green products.	
Green Promotion	Environmentally friendly marketing are beneficial to society.	Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Hashem & Al-Rifai (2011)
	Employees of green products companies advise customers on how to use their products not to harm the environment.	
	Green product companies contribute to supporting environmental centers.	
	Green promotional strategies are effective when used by green businesses. I enjoy commercials that provide information about environmentally responsible items.	

Green Product Purchase Intention	In future, I want to look for environmentally friendly things to buy as it is less polluting.	Rezai et al. (2012) and Chiu et al. (2012)
	I'll spend more time looking for ecologically friendly alternatives to the things I regularly purchase in the future.	
	I'm going to spend some time browsing business websites to find out more about green solutions.	
	I am ready to pay more for green products	
	If advertisements are used to explain the green product it may influence my decision to purchase.	
	I will also recommend others to purchase green products.	

3.5. Testing of Hypothesis 2:

The following hypothesis and sub hypothesis has been tested in this section.

H_2: **There is a significant relationship between green marketing mix and customer green product purchase intention**.

H_2a: There is a significant relationship between green product and customer green product purchase intention.

H_2b: There is a significant relationship between green price and customer green product purchase intention.

H_2c: There is a significant relationship between green place and customer green product purchase intention.

H_2d: There is a significant relationship between green promotion and customer green product purchase intention.

3.5.1. Mean, standard deviation and reliability value for variables

Table 3.2 gives a clear picture of each variable's items as well as the reliability of those items, as determined by Cronbach's Alpha. Testing the internal consistency of the items inside the variable is the goal of the reliability measurement.

Every variable has a Cronbach alpha of greater than 0.8, which is consistent with Nunnally's (1978) finding that values of 0.7 or above indicate good results.

Table 3.2: Mean, standard deviation and Cronbach alpha value for variables

Variables	Statements	Mean	Std. Deviation	Cronbach's alpha
Green Product	I prefer eco-friendly products over non-eco-friendly products	1.91	.963	0.87
	Eco friendly products are valuable to the society	1.91	.995	
	Eco-friendly products consumption will not harm our health	1.97	1.040	
	Eco-friendly products will not create pollution in our environment	2.20	.978	
	Purchasing eco-friendly products will contribute to sustainable future	2.20	1.054	
Green Price	Eco-friendly products are highly priced	2.12	.984	0.896
	I am willing to pay more for eco-friendly products	2.31	.874	
	The price of the products are normal	2.26	.944	
	The benefits of green products are justified by price.	2.23	.838	
	For premium green products, the price will also be premium	2.33	.873	
Green Place	Green products are easily available	2.25	.972	0.879
	I don’t need to go a long way for purchasing of green products	2.33	1.019	
	Environmentally friendly products are offered by prestigious vendors/ marketers.	2.29	.882	
	The company (x) is eager to work with agents that are environmentally conscious.	2.30	.886	
	The company’s have done proper distribution of green products.	2.35	.871	

Green Promotion	Environmentally friendly marketing are beneficial to society.	2.17	1.030	0.855
	Employees of green products companies advise customers on how to use their products not to harm the environment.	2.10	.922	
	Green product companies contribute to supporting environmental centres.	2.30	.942	
	Green promotional strategies are effective when used by green businesses.	2.30	.895	
	I enjoy commercials that provide information about environmentally responsible items.	2.24	.970	
Green Product Purchase Intention	In future, I want to look for environmentally friendly things to buy as it is less polluting.	2.57	1.015	0.928
	I'll spend more time looking for ecologically friendly alternatives to the things I regularly purchase in the future.	2.50	1.066	
	I'm going to spend some time browsing business websites to find out more about green solutions.	2.57	1.067	
	I am ready to pay more for green products	2.58	1.146	
	If advertisements are used to explain the green product it may influence my decision to purchase.	2.56	1.101	
	I will also recommend others to purchase green products.	2.49	1.146	

Source: *Author's Calculation*

3.5.2. Discriminant Validity:

In table 3.3, discriminant validity has been analysed using Fornell – Larcker criteria as it is one of the most commonly used discriminant validity techniques. In the table, the diagonal elements bolded are the square root of (AVE) and the off-diagonal elements are the correlation among them. Given these requirements, the AVE extracted value needs to exceed the correlation between the components. A

latent construct ought to be better at explaining its own indicator's variation than the variance of other latent constructs. Consequently, correlations with other latent constructs need to be less than the square root of the AVE for each construct (Hair et al., 2014). Square root (AVE) for constructs in bold was shown to be more correlated with the research than other constructs. Green price has a square root of AVE 0.812, which is greater than (0.789, 0.766, 0.760 and 0.661) similarly green product has a square root of AVE 0.841, which is greater than (0.841, 0.766, 0.738 and 0.606) whereas green promotion has a square root of AVE 0.821 which is greater than (0.777 and 0.641) similarly green place has a square root of AVE 0.796 which is greater than (0.609) and green product purchase intention has a AVE of 0.858.

Table 3.3: Discriminant validity: Fornell-Larcker criterion

Constructs	**Green Price**	**Green Product**	**Green Promotion**	**Green Place**	**Green Product Purchase Intention**
Green Price	**0.812**				
Green Product	0.789	**0.841**			
Green Promotion	0.766	0.766	**0.821**		
Green Place	0.76	0.738	0.777	**0.796**	
Green Product Purchase Intention	0.661	0.606	0.641	0.609	**0.858**

Source: *Author's Calculation*

3.5.3. Factor Analysis:

According to Churchill's (1979) advice, coefficient alpha (Cronbach, 1951) was estimated in the initial step of scale purification to evaluate the overall 26-item instrument's reliability. To test the consistency of the data, reliability test was conducted and the Cronbach alpha of each of the variable was found to be higher than 0.8 which depicts high reliability of scale. The impact of green marketing mix on purchase intention of the consumer were extracted using factor analysis (FA) with principal component analysis (PCA), and varimax rotation. The orthogonal rotation varimax was used with the assumption that each factor existed independently of the others. Factor loadings below 0.5, was discarded and rerun. Scores greater than 0.4 are considered stable (Guadagnoli and Velicer, 1988). Both the KMO (Kaiser-Meyer-Olkin) metric of sampling adequacy and Bartlett's Test of Sphericity were used to determine whether the data were appropriate for factor analysis. According to the results of the exploratory factor analysis, which are shown in the table below, the Kaiser-Meyer-Olkin measure of sampling adequacy is fulfilled relative to the benchmark values. Where the KMO is 0.956 which means the sampling is adequate and is a good score. According to Hair et al., (2009), the observed KMO value of MSA, which was determined to be 0.956, is larger than 0.8 and indicates "meritorious" based on the aforementioned table Consequently, the sample is suitable and suited for testing. Additionally, Field (2009) asserted that a KMO value of MSA greater than 0.9 is regarded as "superb". The data set was deemed suitable for running factor analysis because Bartlett's Test of Sphericity, which was also performed to examine the overall significance of matrices, was found to be highly significant 0.000 (Bartlett's sign <0.001) with an approximate chi square of 5632.159.

Table 3.4: KMO and Bartlett's Test Outcome

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.956
Bartlett's Test of Sphericity	Approx. Chi-Square	5632.159
	df	231
	Sig.	0.000

Source: *Author's Calculation*

The below Table 3.5 explains the communality value. The initial assumption of principal component analysis is that all variations are common, or that the communalities are all 1 prior to extraction. The communalities value which must be more than 0.5 to be taken into consideration for further analysis, indicates the similarities that account for how much of the variation. Here from the table below its clear that all the factors have more than 0.5 communality value, as higher the communality value, the more the extracted factors explain the variance of the item

Table 3.5: Communalities

	Initial	Extraction
Green Product 1	1	0.786
Green Product 2	1	0.816
Green Product 3	1	0.753
Green Product 4	1	0.651
Green Product 5	1	0.581
Green Price 2	1	0.716
Green Price 3	1	0.729

Green Price 4	1	0.752
Green Price 5	1	0.763
Green place 3	1	0.782
Green place 4	1	0.66
Green place 5	1	0.78
Green Promotion 2	1	0.609
Green Promotion 3	1	0.711
Green Promotion 4	1	0.789
Green Promotion 5	1	0.695
Green Product Purchase Intention 1	1	0.724
Green Product Purchase Intention 2	1	0.801
Green Product Purchase Intention 3	1	0.799
Green Product Purchase Intention 4	1	0.752
Green Product Purchase Intention 5	1	0.699
Green Product Purchase Intention 6	1	0.685

Extraction Method: Principal Component Analysis

Source: *Author's Calculation*

Subsequently, table 3.6 provides statistical view on the total variance. The initial Eigen values are displayed in three columns, with the first column listing the values of each component in decreasing order, the second column listing the percentage of variation explained, and the third column stating the cumulative variance, with factor 1 explaining 52.544% of variance. There are only three elements with eigenvalues larger than 1 in the original solution. They combine to explain over 65.483% of the variability in the initial variables, but there is still a great deal of unaccounted-for variance. As in the research the eigenvalue criteria were skipped as the researcher proposed to have 5 factors. The variation explained by the retrieved components prior to rotation is displayed in the second half of this table. The rightmost column of the table displays the variation that the extracted components after rotation may account for. Before rotation factor 1 accounts for considerably more variance (11.560), but after rotation it has reduced to (4.684) while factors 2 , 3, 4, 5 has increased Eigen values to (3.587, 2.642, 2.620, 2.501).

Table 3.6: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.56	52.544	52.544	11.56	52.544	52.544	4.684	21.292	21.292
2	1.84	8.362	60.905	1.84	8.362	60.905	3.587	16.304	37.596
3	1.007	4.577	65.483	1.007	4.577	65.483	2.642	12.008	49.603
4	0.85	3.862	69.345	0.85	3.862	69.345	2.62	11.91	61.514
5	0.779	3.539	72.883	0.779	3.539	72.883	2.501	11.37	72.883
6	0.63	2.863	75.746						
7	0.601	2.732	78.478						
8	0.533	2.424	80.903						

9	0.439	1.994	82.896						
10	0.433	1.966	84.862						
11	0.395	1.797	86.66						
12	0.371	1.686	88.346						
13	0.333	1.515	89.86						
14	0.327	1.488	91.348						
15	0.306	1.393	92.741						
16	0.279	1.267	94.009						
17	0.262	1.191	95.2						
18	0.253	1.15	96.35						
19	0.234	1.062	97.412						
20	0.218	0.99	98.402						
21	0.189	0.857	99.259						
22	0.163	0.741	100						

Extraction Method: Principal Component Analysis.

Source: *Author's Calculation*

Table 3.7 presents the rotated component matrix, which is the last stage in factor analysis. There are two categories of rotation viz. orthogonal rotation and oblique rotation, where the first approach created uncorrelated elements while the latter group produced correlated factors. However, according to literature, varimax (orthogonal) creates a clear, straightforward structure in a single matrix that is simple to read (Costello, 2005). Varimax rotation was used in this study. The rotated matrix produced improved solutions with a more distinct factor structure, according to varimax rotation. The issue of variables that have significant loadings on many matrix factors, as shown in the preceding component matrix, is resolved by rotation. As a result, none of the factor loadings below 0.50 are presented.

From the table 3.7 below it can be observed that there were 26 statements before but after performing Exploratory Factor Analysis, there were some factors which were loading on another factor as well, which is not acceptable. As a result, few statements were removed to make the matrix clearer and straight-forward. Statements such as “Eco friendly products are highly priced” under green price, “Green products are easily available” and “I don’t need to go a long way for purchasing of green products” under green place, and “Environmentally friendly marketing are beneficial to society” under green promotion has been deleted and total 22 items were considered.

Table 3.7: Rotated Component Matrix

Factors	Statements	Component				
		1	2	3	4	5
Green Product Purchase Intention	In future, I want to look for environmentally friendly things to buy as it is less polluting.	0.784				
	I'll spend more time looking for ecologically friendly alternatives to the things I regularly purchase in the future.	0.815				
	I'm going to spend some time browsing business websites to find out more about green solutions.	0.815				
	I am ready to pay more for green products	0.794				
	If advertisements are used to explain the green product it may influence my decision to purchase.	0.741				

	I will also recommend others to purchase green products.	0.742				
Green Product	I prefer eco-friendly products over non-eco-friendly products		0.781			
	Eco friendly products are valuable to the society		0.755			
	Eco friendly products consumption will not harm our health		0.687			
	Eco friendly products will not create pollution in our environment		0.64			
	Purchasing ecofriendly products will contribute to sustainable future		0.59			
Green Promotion	Employees of green products companies advise customers on how to use their products not to harm the environment.			0.522		
	Green product companies contribute to supporting environmental centers.			0.687		
	Green promotional strategies are effective when used by green businesses.			0.734		
	I enjoy commercials that provide information about environmentally responsible items.			0.625		
Green Price	I am willing to pay more for ecofriendly products				0.641	
	The price of the products are				0.623	

	normal					
	The benefit of green product are justified by price.				0.689	
	For premium green products the price will also be premium				0.687	
Green Place	The price of the products are normal					0.757
	The benefit of green product are justified by price.					0.632
	For premium green products the price will also be premium					0.786

Extraction Method: Principal Component Analysis**. Rotation Method**: Varimax

Rotation converged in 6 iterations.

Source: *Author's Calculation*

3.5.4. Correlation Analysis:

Correlation analysis is utilized to determine whether there is a link between two variables or datasets and how substantial that relationship could be. This implies that, in terms of market research, correlation analysis is used to examine quantitative data acquired through research techniques like surveys and polls, and is used determine whether there are any notable relationships, patterns, or trends existed between the two. In the words of Croxton and Cowden, "When the relationship is of a quantitative nature, the appropriate statistical instrument for identifying and evaluating the connection and describing in a brief equation is known as correlation." To assess the strength of the association between two or more variables, Pearson correlation analysis is used.

Table 3.8: Correlation Analysis

	Green product	Green price	Green place	Green promotion	Purchase intention
Green product	1				
Green price	.762**	1			
Green place	.660**	.642**	1		
Green promotion	.734**	.716**	.691**	1	
Green Product Purchase intention	.606**	.635**	.563**	.623**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Source: *Author's Calculation*

Table 3.8 reveals the correlation matrix of the variables. A substantial connection between the independent factors and the dependent variable is revealed by the two-tail test's results at 0.01 significant levels. The results revealed that Green Product, Green Price, Green Promotion, Green Place is positively related with Green Product Purchase Intention.

3.5.5. Multiple Regression Analysis:

Regression demonstrates how two variables are related by establishing the cause-and-effect relationship between two or more variables and showing how changes in one variable's value also affect changes in the other's, Multiple regressions was employed to investigate the impact of the green marketing mix, which consists of green products, green pricing, green place, and green promotion, on purchase intention. Using purchase intention as the dependent variable and green

product, price, location, and promotion as the independent factors, a set of data was analysed.

The dependent variable (green product purchase intention) was impacted by the predicting variables of green product, green price, green place and green promotion. The independent variable significantly predicts purchase intention, F(4, 348)= 79.958, p < .001, which indicates that the four factors under the study has a significant impact on the purchase intention. Moreover, the R^2 = .473 depicts that the model explains 47.3% of the variance in purchase intention.

Table 3.9: Hypotheses Results

Hypothesis	**Regression Weights**	**β**	**t**	**p-value**	**Results**
H_2a	Green product --> Green product purchase intention	.176	1.971	.049	Supported
H_2b	Green price --> Green product purchase intention	.530	4.345	.000	Supported
H_2c	Green place --> Green product purchase intention	.331	2.348	.019	Supported
H_2d	Green promotion--> Green product purchase intention	.418	3.581	.000	Supported
R^2	0.473				
F (4, 348)	79.958				

Source: Author's calculation

Further, analyses were performed on the coefficients to determine the impact of each component on the criterion variable (green product purchase intention). A multiple regression was run to predict green product purchase intention from green product. The dependent variable green product purchase intention was tested on predicting variable green product.The findings from table 3.9 clearly indicates that

(B =.176, t = 1.971, p = 0.049) green product can play a significant role to positively influence the green product purchase intention of consumers indicating customer with higher level of perception tends to have higher tendency towards green product purchase intention. Hence, the null hypothesis was rejected and the alternate hypothesis H_2a has been accepted.

The dependent variable green product purchase intention was tested on the predicting variable green price. The positively significant regression coefficient with a (B= .530) from table 3.9 clearly revealed that green product purchase intention is significantly impacted by green pricing (t = 4.345, p <.001). Hence, the null hypothesis was rejected and the alternate hypothesisH_2bwas accepted

The dependent variable green product purchase intention was tested on predicting variable green place. The findings from table 3.9 indicated a positive significant regression coefficient with (B = .331) thus, green place can significantly and positively influence green product purchase intention (t = 2.348, p = 0.019). Hence, the null hypothesis was rejected and alternate hypothesis H_2chas been accepted.

The positively significant regression coefficient with (B = .418) indicating that customer with higher level of perception towards green promotion has higher tendency towards green product purchase intention. According to the findings, green product purchase intention is significantly and favourably impacted by green promotion (t = 3.581, p <.001). Hence, the null hypothesis was rejected and the alternate hypothesis H_2dwas accepted.

Table 3.10: Effect of green marketing mix towards customer green product purchase intention

Hypothesis	Regression weights	Beta	R^2	t value	p-value	Results
H_2	Green marketing mix --> Green product purchase intention	0.692	0.478	17.979	0.000	Supported

Source: Author's calculation

The hypothesis H_2tests the impact of green marketing mix on customer green product purchase intention. The results in table 3.10 indicates that green marketing mix significantly impacted green product purchase intention (p<.001) which indicates green marketing mix has significant potential to influence the customer green product purchase intention (B= 0.692, t = 17.979). Moreover, R^2 = 0.478, depicts that the model explains 47.8% of variance in green product purchase intention. Hence, the null hypothesis was rejected and alternate hypothesis was accepted.

3.6. Conclusion:

This chapter investigated on how green marketing mix (green product, green price, green place and green promotion) effects customer green product purchase intention. The study revealed that there is a significant positive effect of green marketing mix (green product, green price, green place and green promotion) on green product purchase intention of the customers, which means green marketing mix plays a significant role to enhance the customers green product purchase intention. However, the factor green price (B=.530) and green promotion (B = .418) has utmost significant positive impact on green product purchase intention. These findings are consistent with the findings of Mahmoud, (2018). Moreover, Weisstein et al., (2014), shows that green pricing significantly positively correlates with purchase intention. According to Wanninayake and Randiwela (2008), environmentally friendly distribution, advertising, and packaging have a significant influence on consumer purchasing decisions. It was also evident that green marketing mix overall has significant positive impact on customer green product purchase intention. Thus, the above assumptions are supported.

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Chapter - 4

Green Marketing Mix and Environmental Concerns

4.1. Introduction:

Environmental concern is defined by Ahmad et al., (2010) as a psychological reaction to the environment. Environmental concern, or the results associated with belief on environmental issues, is one of the environmental attitude components. This interest is a result of the fact that people who care more about the environment are also more inclined to act in an ecologically responsible manner (Czap and Czap, 2010). As individuals care more about the environment because of their underlying ecological concerns, which have an effect on other people's lives, environmental concern is seen to represent a social-altruistic value orientation. Kennedy et al., (2009) claims that consumers are aware of the disconnect between rising levels of consumption and environmental concern, which merits a closer look at how environmental concerns both directly and indirectly influence desires to engage in sustainable purchasing behaviour.

The present chapter describes the link between green marketing mix and the environmental concern of the consumers. The initial part of the chapter explains about the green marketing mix and how it affects the environmental concern of the consumers. Environmental concern has been used in research from many decades but the relationship between green marketing mix and environmental concern has not been studied in detail. This chapter will explain the relationship between green marketing mix and environmental concern.

4.2. Green marketing mix and environmental concern

A difference is drawn between attitude, intention, and behaviour in modern attitude theory (Bagozzi & Warshaw, 1990; Netemeyer et al., 1991; Bagozzi, 1993; Eagly & Chaiken, 1993). Fishbein and Ajzen (1975) proposed an influential theory known as the theory of reasoned action (TRA) (Ajzen & Fishbein, 1977), which was later refined and expanded into the theory of planned behaviour (TPB) (Ajzen, 1985, 1991). Environmental concern can be described as people's awareness on environmental problems and their readiness to help for their resolution (Paul et al., 2016). Consumers who are more concerned about the environment tend to have a higher level of optimism, which increases behavioural intentions. Consumer pleasure

is positively related to the degree of environmental respect connected with a product, according to empirical research (Chen et al., 2015). It is probable that contentment has a bigger impact on behavioural goals in those who are more aware of their surroundings. According to Weigel (1983), Ajzen (1989), SjÎberg (1989), and Takala (1991), environmental concern has been interpreted as an assessment of attitude towards facts, one's own activity, or the action of others that has an impact on the environment. Therefore, it appears that concern for the environment may relate to either a particular attitude that directly influences intentions or, more widely, to a broad perspective or perspective on values. Stern (1992), distinguished between four of these value orientations. A new style of thinking known as the new environmental paradigm (NEP) is represented by Dunlap & Van Liere (1978). One of the factors driving the growth of green marketing is customers' rising awareness and their concern for the environment. They are therefore more inclined to look for goods and services that are sustainable and kind to the environment. In order to cater to environmentally sensitive consumers, this development has prompted corporations to embrace environmentally friendly business practices and participate in green marketing. Another factor driving the expansion of green marketing is the growing demand for businesses to adopt environmentally friendly practices and lessen their negative effects on the environment. Companies are under growing pressure from regulators, customers, and other stakeholders to be more accountable in their business practices and supply chains.

According to Paco and Raposo (2008), a mindset tied to environmental effects is what is meant by "environmental concern." According to Chen's (2013) research, environmental concern is also described as a general attitude that has a subtle influence on behaviour due to behavioural intention. Environmental concern is seen as a global mindset that has indirect behavioural impacts due to behavioural intention. Environmental concern was mentioned as an intense attitude towards environmental preservation (Chen, 2013). Environmental research is essentially founded on people's environmental concerns, which have a direct impact on pro-environmental behaviour. Consumer conservation behaviour displays their innate concern for society and the environment (Fransson & Gärling, 1999). Environmental

awareness plays a significant role in consumer decision-making (Ottman & Books, 1998). Numerous researches highlight how buying decisions about environmentally friendly items are influenced by this concern. Customers that are really concerned about the environment embrace environmentally friendly goods and quickly pick them up while making purchases. In the study by Choi and Kim (2005), it was discovered that customers with higher environmental concerns were more likely to buy green items than consumers with lower environmental concerns. Although the majority of research demonstrates a direct relationship between consumer environmental worry and their intentions to make green purchases, Han et al., (2009) and Hartmann and Apaolaza, (2012), found that customer attitudes towards green products serve as a mediator between consumer environmental concern and green purchase intention. In Malaysia, understanding of the effects of environmental issues has evolved and improved through time for sustainability reasons. This expansion may aid green product marketers in developing fresh opportunities for sustainable consumption. According to a recent survey (Ogiemwonyi et al., 2020), customers are now eager to buy green products and support green purchase behaviour. The environmental concern and green purchase behaviour nexus may have a beneficial interaction. Previous research (Khan and Mohsin, 2017) have underlined the impact of social values, consumer interest, and environmental values on consumer propensity for green purchase behaviour. Environmental concern will aid in reducing environmental destruction.

There were very few research done to see if there is an impact of green marketing mix on environmental concern of the consumers, to fulfil this gap this research focuses on to find the relationship between green marketing mix green product, green price, green place and green promotion and environmental concern of the consumers.

4.3. Theoretical framework

Figure 4.1 shows the conceptual framework model that was created based on the literature research. Green product, green pricing, green place, and green

promotion were used as independent factors in the study with consumer purchase intention serving as the dependent variable.

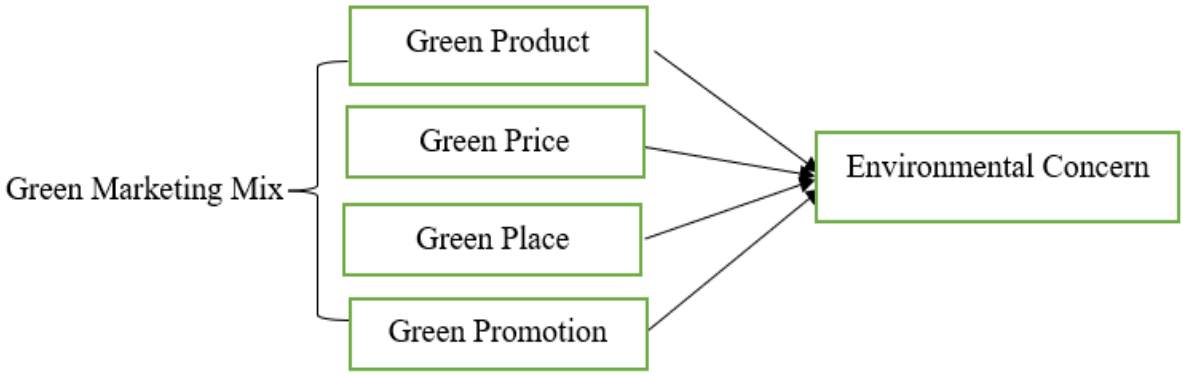

Figure 4.1: Conceptual Framework

Source: Author's own compilation

Measurement Items:

Table 4.1 provides the constructs for purchase intention and the sources from where they have been taken. The independent variable viz. green product, green price, green place and green promotion has been adopted from Chen & Chang, (2012); Nguyen et al., (2019); Tariq, (2014); Hashem & Al- Rifai, (2011) and the dependent variable environmental concern has been adopted from Dunlap (2000).

Table 4.1: Summary of the Constructs and their Sources

Constructs	Measuring Items	Source
Green Product	I prefer eco-friendly products over non-eco-friendly products	Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Hashem & Al-Rifai (2011)
	Eco friendly products are valuable to the society	
	Eco friendly products consumption will not harm our health	
	Eco friendly products will not create pollution in our environment	

	Purchasing eco-friendly products will contribute to sustainable future	
Green Price	Eco friendly products are highly priced	Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Hashem & Al-Rifai (2011)
	I am willing to pay more for eco-friendly products	
	The price of the products are normal	
	The benefit of green product are justified by price.	
	For premium green products the price will also be premium	
Green Place	Green products are easily available	Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Hashem & Al-Rifai (2011)
	I don't need to go a long way for purchasing of green products	
	Environmentally friendly products are offered by prestigious vendors/ marketers.	
	The company (x) is eager to work with agents that are environmentally conscious.	
	The company's have done proper distribution of green products.	
Green Promotion	Environmentally friendly marketing are beneficial to society.	Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Hashem & Al-Rifai (2011)
	Employees of green products companies advise customers on how to use their products not to harm the environment.	
	Green product companies contribute to supporting environmental centers.	
	Green promotional strategies are effective when used by green businesses.	

	I enjoy commercials that provide information about environmentally responsible items.	
Environmental Concern	We're getting close to the limit of how many people the Earth can support.	Dunlap (2000)
	Citizens have a right to alter the natural environment in order to meet their own wants.	
	When humans intervene with nature, the results are frequently terrible.	
	Human ingenuity will ensure that the Earth does not become uninhabitable.	
	Humans are doing havoc on the ecosystem.	
	If we merely learn to enhance and develop natural resources, the Earth has plenty of them.	
	Plants and animals have the same right to life as humans.	
	The natural balance is powerful enough to withstand the effects of modern industrialised nations.	
	Humans are nonetheless subject to the rules of nature, notwithstanding our extraordinary skills.	
	The Earth is a spaceship with a finite amount of space and resources.	

4.4. Testing of Hypothesis 3:

The following hypothesis 3 and its sub hypotheses were tested under this section.

***H_3*: There is a significant relationship between customers' perception of green marketing mix and their environmental concern**.

H_3a: There is a significant relationship between customers' perception of green product and their environmental concerns.

H_3b: There is a significant relationship between customers' perception of green price and their environmental concerns.

H_3c: There is a significant relationship between customers' perception of green place and their environmental concerns.

H_3d: There is a significant relationship between customers' perception of green promotion and their environmental concerns.

4.4.1. Mean, standard deviation and reliability value for variables

Table 4.2 gives a clear picture of each variable's items as well as the reliability of those items, as determined by Cronbach's Alpha. Testing the internal consistency of the items inside the variable is the goal of the reliability measurement. Every variable has a Cronbach alpha of greater than 0.8, which is consistent with Nunnally's (1978) finding that values of 0.7 or above indicate good results.

Table 4.2: Items Statistics

Constructs	Statements	Mean	Std. Deviation	Cronbach's Alpha
Green Product	I prefer eco-friendly products over non eco-friendly products	1.91	.963	0.896
	Eco friendly products are valuable to the society	1.91	.995	
	Eco friendly products consumption will not harm our health	1.97	1.040	
	Eco friendly products will not create pollution in our environment	2.20	.978	
	Purchasing eco-friendly products will contribute to sustainable future	2.20	1.054	
Green Price	Eco friendly products are highly	2.12	.984	0.87

	priced			
	I am willing to pay more for eco-friendly products	2.31	.874	
	The price of the products are normal	2.26	.944	
	The benefits of green products are justified by price.	2.23	.838	
	For premium green products the price will also be premium	2.33	.873	
Green Place	Green products are easily available	2.25	.972	0.855
	I don't need to go a long way for purchasing of green products	2.33	1.019	
	Environmentally friendly products are offered by prestigious vendors/ marketers.	2.29	.882	
	The company (x) is eager to work with agents that are environmentally conscious.	2.30	.886	
	The company's have done proper distribution of green products.	2.35	.871	
Green Promotion	Environmentally friendly marketing are beneficial to society.	2.17	1.030	0.879
	Employees of green products companies advise customers on how to use their products not to harm the environment.	2.10	.922	
	Green product companies contribute to supporting environmental centers.	2.30	.942	
	Green promotional strategies are effective when used by green businesses.	2.30	.895	
	I enjoy commercials that provide information about environmentally responsible items.	2.24	.970	

	We're getting close to the limit of how many people the Earth can support.	2.18	.922	
	Citizens have a right to alter the natural environment in order to meet their own wants.	2.24	.950	
	When humans intervene with nature, the results are frequently terrible.	2.04	.995	
	Human ingenuity will ensure that the Earth does not become uninhabitable.	2.17	.930	
	Humans are doing havoc on the ecosystem.	2.09	.959	
Environmental Concern	If we merely learn to enhance and develop natural resources, the Earth has plenty of them.	2.09	.980	
	Plants and animals have the same right to life as humans.	2.03	.980	0.94
	The natural balance is powerful enough to withstand the effects of modern industrialised nations.	2.13	.919	
	Humans are nonetheless subject to the rules of nature, notwithstanding our extraordinary skills.	2.11	.885	
	The Earth is a spaceship with a finite amount of space and resources.	2.20	.931	

Source: *Author's Calculation*

4.4.2. Discriminant Validity:

In table 4.3, discriminant validity has been analysed using Fornell – Larcker criteria which is one of the most commonly used discriminant validity techniques. In the table, the diagonal elements bolded are the square root of (AVE) and the off-diagonal elements are the correlation among them. Given these requirements, the AVE extracted value needs to exceed the correlation between the components. A latent construct ought to be better at explaining its own indicator's variation than the

variance of other latent constructs. Consequently, correlations with other latent constructs need to be less than the square root of the AVE for each construct (Hair et al., 2014). Square root (AVE) for constructs in bold was shown to be more correlated with the research than other constructs. Environmental Concern has a square root of AVE 0.805, which is greater than (0.738, 0.749, 0.802 and 0.720) similarly green price has a square root of AVE 0.812, which is greater than (0.788, 0.766, and 0.761) similarly green product has a square root of AVE 0.841, which is greater than (0.768 and 0.739) whereas green promotion has a square root of AVE 0.821 which is greater than (0.781) similarly green place has a square root of AVE 0.795.

Table 4.3: Discriminant Validity

Constructs	Environmental Concern	Green Price	Green Product	Green Promotion	Green place
Environmental Concern	**0.805**				
Green Price	0.738	**0.812**			
Green Product	0.749	0.788	**0.841**		
Green Promotion	0.802	0.766	0.768	**0.821**	
Green place	0.720	0.761	0.739	0.781	**0.795**

Source: *Author's Calculation*

4.4.3. Factor Analysis:

A statistical technique called factor analysis is used to condense a large collection of observable variables into a manageable number of latent components. By examining the covariance between a group of observed variables, it is a method that determines the minimal number of observable common elements (Malhotra, 2011). Principal Component Analysis was employed in which the largest variance is

initially extracted via principal component analysis and added to the first factor. The variation described by the first factors is then removed, and the highest variance for the second component is then extracted. The final factor is reached through this approach. The orthogonal rotation varimax was used with the assumption that each factor existed independently of the others. Factor loadings below 0.5, was discarded and rerun. Scores greater than 0.4 are considered stable (Guadagnoli and Velicer, 1988). Both the KMO (Kaiser-Meyer-Olkin) metric of sampling adequacy and Bartlett's Test of Sphericity were used to determine if the data were appropriate for factor analysis. The KMO evaluates sampling adequacy, which assesses whether the responses provided with the sample are sufficient or not. This value must be near to 0.5 in order for factor analysis to proceed satisfactorily. According to Kaiser (1974), values for KMO should be at least 0.5 (just acceptable), between 0.7 and 0.8 (good), and above 0.9 (superb). The KMO measure is 0.962, which is superb. Consequently, the sample is suitable and suited for testing. The data set was deemed suitable for running factor analysis because Bartlett's Test of Sphericity, which was also performed to examine the overall significance of matrices, was found to be highly significant 0.000 (Bartlett's sign <0.001) with an approximate chi square of 5618.802.

Table 4.4: KMO and Bartlett's Test Outcome

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.962
Bartlett's Test of Sphericity	Approx. Chi-Square	5618.802
	df	231
	Sig.	0.000

Source: *Author's Calculation*

Table 4.5 explains the communality value, The initial assumption of principal component analysis is that all variations are common, or that the communalities are all 1 prior to extraction. The communalities value must be more than 0.5 to be taken into consideration for further analysis, which indicates the similarities that account

for how much of the variation. Here from the table 4.5 below its clear that all the factors have more than 0.5 communality value.

Table 4.5: Communalities

	Initial	Extraction
Green Product 1	1	0.779
Green Product 2	1	0.82
Green Product 3	1	0.761
Green Product 4	1	0.692
Green Product 5	1	0.677
Green Price 3	1	0.741
Green Price 4	1	0.624
Green Price 5	1	0.83
Green place 3	1	0.797
Green place 4	1	0.662
Green place 5	1	0.764
Green Promotion 2	1	0.662
Green Promotion 3	1	0.721
Green Promotion 4	1	0.682
Environmental Concern 3	1	0.721
Environmental Concern 4	1	0.698
Environmental Concern 5	1	0.728
Environmental Concern 6	1	0.745
Environmental Concern 7	1	0.643
Environmental Concern 8	1	0.714
Environmental Concern 9	1	0.735
Environmental Concern 10	1	0.714

Extraction Method: Principal Component Analysis.

Source: *Author's Calculation*

Subsequently, table 4.6 provides statistical view on the total variance. The initial eigenvalues are displayed in three columns, with the first column listing the values of each component in decreasing order, the second column listing the percentage of variation explained, and the third column stating the cumulative variance, with factor 1 explaining 55.024% of variance. There are only three elements with eigenvalues larger than 1 in the original solution. They combine to explain over 65.311% of the variability in the initial variables, but there is still a great deal of unaccounted-for variance. As in the research the eigenvalue criteria were skipped as the researcher proposed to have 5 factors. The variation explained by the retrieved components prior to rotation is displayed in the second half of this table. The rightmost column of the table displays the variation that the extracted components after rotation may account for. Before rotation, factor 1 accounts for considerably more variance (12.105), but after rotation, it has reduced to (5.007) while factors 2, 3, 4, 5 has increased eigenvalues to (3.489, 2.770, 2.656, 1.988).

Table 4.6: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.105	55.024	55.024	12.105	55.024	55.024	5.007	22.761	22.761
2	1.289	5.859	60.883	1.289	5.859	60.883	3.489	15.86	38.621
3	0.974	4.428	65.311	0.974	4.428	65.311	2.77	12.59	51.21
4	0.855	3.887	69.198	0.855	3.887	69.198	2.656	12.074	63.285
5	0.687	3.123	72.321	0.687	3.123	72.321	1.988	9.036	72.321
6	0.592	2.689	75.01						
7	0.564	2.565	77.576						

8	0.515	2.343	79.918						
9	0.497	2.26	82.178						
10	0.458	2.084	84.262						
11	0.398	1.811	86.073						
12	0.38	1.729	87.801						
13	0.36	1.638	89.439						
14	0.334	1.52	90.96						
15	0.315	1.431	92.391						
16	0.292	1.327	93.718						
17	0.288	1.307	95.025						
18	0.259	1.178	96.203						
19	0.238	1.082	97.285						
20	0.226	1.028	98.313						
21	0.209	0.948	99.262						
22	0.162	0.738	100						
Extraction Method: Principal Component Analysis.									

Source: *Author's Calculation*

Table 4.7 is the rotated component matrix, the last stage in the study. There are two categories of rotation are orthogonal rotation and oblique rotation, where the first approach created uncorrelated elements while the latter group produced correlated factors. However, according to literature, varimax (orthogonal) creates a clear, straightforward structure in a single matrix that is simple to read (Costello). Varimax rotation was used in this study. The rotated matrix produced improved solutions with a more distinct factor structure, according to varimax rotation. The issue of variables that have significant loadings on many matrix factors, as shown in

the preceding component matrix, is resolved by rotation. As a result, none of the factor loadings below 0.50 are presented.

From the table 4.7 below it can be observed that there were 30 statements before but after performing an exploratory factor analysis there were some factors that were loading on another factor as well, which is not acceptable. As a result, few statements were removed to make the matrix clearer and more straightforward. Statements “Eco-friendly products are highly priced” and “I am willing to pay more for eco-friendly products” under green price, “green products are easily available” and “I don’t need to go a long way to purchase of green products” under green place, and “environmentally friendly marketing are beneficial to society” and “I enjoy commercials that provide information about environmentally responsible items” under green promotion, and “We're getting close to the limit of how many people the Earth can support” and “Citizens have a right to alter the natural environment in order to meet their own wants” has been deleted and total 22 items were considered.

Table 4.7: Rotated Component Matrix

Factors	Statements	Component				
		1	2	3	4	5
Environmental Concern	When humans intervene with nature, the results are frequently terrible.	0.684				
	Human ingenuity will ensure that the Earth does not become uninhabitable.	0.719				
	Humans are doing havoc on the ecosystem.	0.716				
	If we merely learn to enhance and develop natural resources, the Earth has plenty of	0.698				

	them.					
	Plants and animals have the same right to life as humans.	0.648				
	The natural balance is powerful enough to withstand the effects of modern industrialised nations.	0.611				
	Humans are nonetheless subject to the rules of nature, notwithstanding our extraordinary skills.	0.688				
	The Earth is a spaceship with a finite amount of space and resources.	0.759				
Green Product	I prefer eco-friendly products over non eco friendly products		0.709			
	Eco-friendly products are valuable to the society		0.748			
	Eco-friendly products consumption will not harm our health		0.681			
	Eco-friendly products will not create pollution in our environment		0.662			
	Purchasing eco-friendly products will contribute to sustainable future		0.603			
Green Place	The price of the			0.791		

	products are normal					
	The benefits of green product are justified by price.			0.662		
	For premium green products the price will also be premium			0.777		
Green Price	The price of the products are normal				0.637	
	The benefit of green product are justified by price.				0.527	
	For premium green products the price will also be premium				0.807	
Green Promotion	Employees of green products companies advise customers on how to use their products not to harm the environment.					0.532
	Green product companies contribute to supportingenvironmenta lcenters.					0.609
	Green promotional strategies are effective when used by green businesses.					0.51

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Source: *Author's Calculation*

4.4.4. Correlation analysis

Correlation analysis is utilized to determine whether or if there is a link between two variables or datasets and how substantial that relationship could be. The degree of relationship between the variables was examined using Pearson correlation, the most commonly used correlation analysis metric. It gauges the link among the dependent variable, or environmental concern, and the independent variable, or green product, green price, green place and green promotion. Three key components make up the correlation analysis: Measuring the degree of link between the two variables, determining the significance of the relationship, and, if applicable, establishing a cause-and-effect relationship are the three steps (Krishnaswami & Ranganatham, 2011).

Table 4.8 reveals the correlation matrix of the variables. A substantial connection between the independent factors and the dependent variable is revealed by the two-tail test's results at 0.01 significant levels. The results revealed that green product, green price, green promotion, green place is positively related with environmental concern.

Table 4.8: Correlation Analysis

	Green Product	**Green Price**	**Green Place**	**Green Promotion**	**Environmental Concern**
Green Product	1				
Green Price	.738**	1			
Green Place	.660**	.633**	1		
Green Promotion	.712**	.719**	.667**	1	
Environmental Concern	.744**	.711**	.634**	.742**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Source: *Author's Calculation*

4.4.5. Multiple Regression Analysis:

Table 4.9 shows the multiple regression analysis results. A development of linear regression models, multiple regression allows for predictions of systems with numerous independent variables. Regressions on models with a single dependent variable and numerous independent variables are specially created using multiple regression. Multiple regressions were employed to analyse the influence of green marketing mix (green product, green price, green place and green promotion) on environmental concern was examine. A collection of data was subjected to analysis using environmental concern as the dependent variable and green product, green price, green place and green promotion as the independent factors.

The dependent variable (environmental concern) was impacted by predicting variables of green product, green price, green place and green promotion. The independent variable significantly predicts purchase intention, $F(4, 348)= 172.709$, $p < .001$, which indicates that the four factors under the study have a significant impact on the purchase intention. Moreover, the $R^2 = .661$ depicts that the model explains 66.1 % of the variance in environmental concern.

Table 4.9: Multiple Regression Analysis

Hypothesis	Regression Weights	Beta β	t value	p value	Results
H3a	Green Product --> Environmental Concern	.465	6.104	.000	Supported
H3b	Green Price --> Environmental Concern	.519	3.765	.000	Supported
H3c	Green Place --> Environmental Concern	.254	2.052	.041	Supported
H3d	Green Promotion --> Environmental Concern	.839	6.273	.000	Supported
R^2	0.661				
F(4, 348)	172.709				

Source: Author's calculation

Additionally, coefficients were further assessed to ascertain the influence of each of the factors on the criterion variable (environmental concern).A multiple regression was run to predict environmental concerns from green product, green price, green place, and green promotion.

The dependent variable environmental concern was tested on predicting variable green product. The positively significant regression coefficient (β = 0.465) clearly revealed that green product has a significant and positive impact on environmental concern (t = 6.104, p <.001). Hence, the null hypothesis was rejected and the alternate hypothesisH_3a has been accepted.

The positively significant regression coefficient (β = 0.519) revealed that green price significantly and favourably influences environmental concern of customers (t = 3.765, p <.001) as the p value is significant. Hence, the null hypothesis rejected and the alternate hypothesisH_3b was accepted.

The dependent variable environmental concern was tested on predicting variable green place. The results from table 4.9 revealed that green place significantly and favourably influences environmental concern (β = .254, t = 2.052, p = 0.041). Hence, the null hypothesis was rejected and the alternate hypothesisH_3c was accepted.

The dependent variable environmental concern was tested on predicting variable green promotion. The results from table 4.9 revealed a positively significant regression coefficient with (β = .839) indicating green promotion has a significant influence on environmental concern (t = 6.273, p < .001) as the p-value is significant. Hence, the null hypothesis was rejected and the alternate hypothesis H_3d was accepted.

Table 4.10: Effect of green marketing mix on the environmental concern

Hypothesis	Regression weights	Beta β	R^2	t value	p-value	Results
H_3	Green Marketing Mix --> Environmental Concern	0.809	0.653	25.782	0.000	Supported

Source: *Author's calculation*

The hypothesis H_3 tests the impact of green marketing mix on customer environmental concern. The results in table 4.10 revealed that R^2 = 0.653 which shows that the model explains 65.3% of variance in the dependent vairable i.e. environmental concern. Moreover, the analysis showed that green marketing mix significantly impacted environmental concern (p<.001) indicating that green marketing mix has a significant relationship with the customer's environmental concern (β = 0.809, t = 25.782). Hence, the null hypothesis was rejected and the alternate hypothesis H_3 was accepted.

4.5. Conclusion:

This chapter focuses on how green marketing mix (green product, green price, green place and green promotion) effects the customer environmental concern. It is evident from the results that green marketing mix has a positive impact on the environmental concerns of customers. Green marketing practices help to educate more about the environment so that the consumers can make a proper decision that will lead towards a sustainable environment. Environmentally conscious consumers are more likely to make environmentally responsible purchases, according to a number of studies (Roberts and Bacon, 1997; Czap and Czap, 2010). Bang et al., (2000) found that consumers who were ready to pay extra for renewable energy were more likely to display environmental concern than those who weren't. According to the study green product, green price and green promotion has more impact towards environmental concern than green place. Thus, the above hypotheses made were supported.

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Chapter -5

Greenwashing Perception and Green Purchase Intention: Environmental Concern as Mediator

5.1. Background of Greenwashing:

The phrase "greenwash" is used to describe businesses' dishonest practices and policies with regard to environmental protection. According to Parguel et al., (2011), the act of deceiving consumers about a company's environmental practices or the environmental benefits of a good or service is known as "greenwashing". Nyilasy et al., (2014) states that the perception of "greenwashing" can be detrimental to a company's reputation and result in adverse outcomes for customers. When customers believe a company is deceiving them by making green promises by its actions and practices contradict these claims, they are likely to feel negatively about the company.

According to previous researches, consumers' perceptions of greenwashing are linked to unfavorable attitudes and behaviours, such as a decrease in their intention to make green purchases and a low opinion of their performance by consumers and a deterioration in business performance (Lyon & Montgomery, 2015; Zhang, Li et al., 2018). Researchers are still curious about how the idea of greenwashing affects consumers' attitudes, particularly their intentions and behaviours around green purchases. It is widely accepted that customer trust is inversely correlated with greenwashing beliefs (Chen & Chang, 2013). This suggests that customers' perceptions of greenwashing lead to a loss of trust, which might be detrimental to their intentions to make green purchases. According to Chen et al., (2014), the impression of "greenwashing" is also associated with a decrease in consumers' perceptions and satisfaction with green products. Aggarwal (2011), in his study revealed that businesses with better CSR scores are even worse at greenwashing. The firm's amplification of little activities, the use of irrelevant information to trick customers, or again the use of colors and visuals that convey a message unrelated to what the company actually is. These are only a few of the strategies employed by businesses to look more moral and environmentally friendly to the public.

For customers to make environmentally responsible purchase decisions, information and knowledge about green products are relatively crucial.

Consequently, this study has two defined goals. First, the study suggests and looks into a theoretical model that links beliefs about greenwashing to doubts about sustainability and plans to buy green products. Second, based on a review of related literature, this study examines at how environmental concern mediates the relationship between intentions of purchasing ecologically friendly products and greenwashing. Companies must be sustainable and accountable to society in addition to being economically sound if they are to achieve the inclusion of social and environmental issues in corporate operations (Antunes et al.,2015). The three bottom lines, sometimes known as "people, planet, and profit," are what they must focus on: economic, environmental, and social performance (Elkington, 1994). Increased demand from consumers "forces businesses to create green marketing plans to demonstrate to customers their good corporate citizenship."

Although the phrase has appeared more frequently in popular media over the past several years, it is still important to discuss the many varieties of greenwashing, how to spot it, and how we might react. The "7 sins of greenwashing," a list of 7 various ways that greenwashing can happen, are a helpful approach to comprehending the practice. These sins, which Terrachoice defined in 2007, help customers recognize and comprehend deceptive and/or inaccurate environmental statements.

i. **Sin of hidden trade off-** This sin ignores more significant and pertinent environmental concerns in favor of focusing on a single, limited pro-environmental. The most prevalent sin is this one, which is effectively a "tree hiding the forest." Examples include equipment that promotes energy efficiency without disclosing the potentially dangerous elements used in manufacture or paper straws that are marketed as the environmentally friendly choice without mentioning the significant water required for production.

ii. **Sin of no proof**- As the name implies, this sin occurs when environmental statements are made without being backed up by reliable data. Data or third-party certification cannot be used to prove the assertion is accurate, making it false and serving as a means in and of itself.

iii. **Sin of vagueness**- Environmental assertions that lack precision and are therefore seen as worthless are referred to as being "vague." When terms like "green," "sustainable," and "eco" are used without providing clear justifications, this sin is committed. Such terminology have become diluted and equivalent due to term misuse and a lack of clearly defined standards. The general public's awareness of environmental concerns is harmed by this.

iv. **Sin of worshipping false labels** - Companies who provide "sustainability" certificates or labels that are merely bogus are guilty of this sin. These can deceive customers by giving the impression that a good or service has through a reliable third-party screening procedure that has independently verified it as ecologically sustainable when in fact this has not happened. In contrast to those claiming to be "100% Organic Certified" or "Energy Efficiency Certified," certification from third parties with identifiable emblems such as B-Corp, Fairtrade, Energy Star, FSC, and Organic Association should be trusted.

v. **Sins of irrelevance** - Products and services that promote a clear environmental trait that doesn't matter are guilty of the sin of irrelevance. They are irrelevant since they don't signify a strategic shift in corporate operations, a culture shift, or a change in fundamental principles that would allow for more ecologically friendly operations. Products devoid of CFC are an excellent example. Despite the fact that CFCs have been outlawed for more than 30 years, you may still find items that claim to be CFC-free in an effort to look ecologically friendly.

vi. **Sin of lesser of two evils** - This type of sin stems from the reality that while the claim may be accurate within the context of a certain product category, it diverts attention away from the significant unviability of the category as a whole. Organic cigarettes or recycled plastics are two excellent examples of this. However, even if recycled plastic is the greatest option, the truly eco-friendly option still involves using no plastic at all.

vii. **Sin of fibbing** - Using assertions about the environment or ethics that are plainly false is another typical tactic. This is frequently employed in particular product categories, such as imitations of generally low-quality goods from China or India, taking advantage of the limited government and consumer inquiries.

5.2. Greenwashing and Green Purchase Intention

The idea of "greenwashing" has become a crucial concept in relation to corporate environmental practices. According to Parguel et al., (2011), "greenwashing" is the act of deceiving customers about a company's environmental policies or the environmental benefits of a good or service. According to studies such as Leonidou et al., (2013); Walker & Wan (2012), companies' green behaviour has an impact on a variety of external stakeholders, such as regulators, consumers, shareholders, investors, and the general public. This suggests that perceptions of "greenwashing" have broad effects and implications for businesses. Consumer response to how closely green advertising statements align with actual business environmental behaviour is known as "greenwashing perception". In its simplest form, a consumer's psychological assessment of whether a business is misrepresenting itself and concealing its genuine environmental message is known as the "greenwashing perception". Consumers are more aware of brands, and this awareness influences their decision to buy any given product. Customers therefore favor branded goods over unbranded goods. Concerns regarding businesses' perceptions of behaviour were voiced by several social and environmental campaigners. It indicates that businesses deceive customers regarding the environmental friendliness of their products. This practice is referred to as "greenwashing," and numerous earlier studies have shown how corporations employ bluewashing, greenwashing, and other techniques to improve their public perceptions and reputations (Beder, 1997). Additionally, it has been noted that misleading businesses may have short-term benefits from greenwashing, but not long-term ones (Polonsky et al., 2010).

Purchase intention can be stated as a person's propensity to buy a certain good or service (Bagozzi, 1981). In the field of marketing, the idea of purchasing intention is crucial. Intentions, which differ from attitudes, might be stated up as an individual's purposeful attempt to do a conduct (Eagly and Chaiken, 1993). When a product or service is referred to be "green," it means that it is intended to be purchased in an environmentally responsible manner. According to Rashid et al. (2009)"green purchase intention" is "the possibility or propensity of a person to

prioritize environmentally friendly goods above conventional ones when making a purchase." Intention to make green purchases has to do with whether or not customer might buy ecologically friendly goods. Three activities, including "taking into account buying green products, switching to other brands for ecological reasons, and converting to a green version of a product," might be used to evaluate it.

Consumer behaviour is negatively affected by greenwashing. Consumers may behave suspiciously and adversely comprehend the reasons behind the firm's hidden motives if they become aware of the disparity between corporate performance and green advertising. Consumers' brand views, green brand equity, and purchase intentions are all impacted by their understanding of greenwashing (Zhang et al., 2018; Dowling & Staelin, 1994). Consumers may be unwilling to establish trust or long-term connections with businesses if they employ greenwashing to mislead them, which will eventually decrease their buying intention. Hence the following hypothesis was formulated.

H_4a:- Greenwashing has a significantly negative impact on green purchase intention.

5.2.1. Greenwashing perception and environmental concern

People have recently demonstrated a growing propensity to protect the environment. Consumer awareness of the significant environmental harm that products create has given rise to the "going green" movement (Chen & Chang, 2013). Environmental concern, according to Dunlap & Jones (2002), is "the degree to which individuals are conscious of issues pertaining to the environment and encourage the efforts to resolve them or express the willingness to personally contribute to their solution." Customers that care deeply about the environment are more likely to act in ways that benefit the environment and feel deeply accountable for it (Klabi & Binzafrah, 2022). "Green" or "environmental concern" refers to a group of mental and affective attitudes towards the environment (Biswas and Roy, 2015). Therefore, preserving the environment is not as important as ensuring human wellbeing (Klabi, 2002). More environmentally conscious customers are likely to recognize false or deceptive environmental claims than less environmentally conscious ones. This shows that consumers who care deeply about the environment

would only buy eco-friendly goods when they believe they can make a contribution in addressing environmental issues (Choi & Johnson, 2019).

Customers who are aware of environmental issues are able to identify greenwashing tactics used in advertisements (Chen and Chang 2013). As a result, several experimental research Newell et al., (1998); Nyilasy et al., (2014) assert that the way businesses change their advertising and the way consumers perceive greenwashing are negatively correlated. As consumers grow more conscious of greenwashing, their perceptions of companies and ads shift. In this approach, deceptive practices known as "greenwashing" have a detrimental impact on consumer attitudes and a drop in customers' intentions to make green purchases (Olson & Dover, 1978). The results of Chen et al., (2018) study indicates that greenwashing by businesses has a detrimental impact on the green purchasing decisions of its customers. The green purchasing habits of companies' customers are negatively impacted by greenwashing. When those consumers who are more environmentally friendly and are aware of the greenwashing practices they become more environmentally concerned. Hence, it can be considered that an increase in the level of awareness in greenwashing perceptions consumers become more environmentally concerned. Thus, the following hypothesis was formulated.

H_4b:- Greenwashing perception has a significant positive impact on environmental concerns.

5.2.2. Environmental concern as a mediator between greenwashing perception and green purchase intention

The concern for the environment is a sign that people are making an attempt to increase understanding of environmental sensitivity (Akehurst et al., 2012). The phrase "environmental concern" refers to people's worries about current or upcoming environmental changes. The phrase "environmental concern" refers to people's worries about current or upcoming environmental issues. It has been noted that different consumer behaviours are affected by environmental concern. Additionally, it is acknowledged that environmental concerns affect product choice, useful research, and behaviours related to variety and receipting (Minton & Rose, 1997).

Consumer awareness has increased significantly in recent years, and as a result, customers are increasingly likely to choose green items that either do not hurt the environment at all or do so less severely than other products. Consumers' future plans or intentions for purchasing green products are determined by their green purchasing intentions.

Green purchasing intention is defined as a consumer's desire to purchase a certain good or service over a specified time period as well as their plan to buy a specific green product during that time. Newell discovered that customers who recognized the advertisement as being "greenwashed" had a reduced desire to buy and thought the marketer was less trustworthy (Newell et al., 1998). There were many factors that were considered to see the effect of greenwashing on green purchase intention of consumers but there are lack of research where environmental concern of the consumers are taken into account to evaluate the effect of greenwashing perception of consumers towards green purchase intention. Where environmental concern is an important factor to be discussed and numerous studies have found that buying intentions for green items are significantly influenced by environmental concern. Khaola et al., (2014); Mostafa, (2009); Maichum et al., (2017); Maichum et al., (2016); and Paul et al., (2016) are a few examples of similar investigations. Through "greenwashing," businesses might refrain from making contributions to a sustainable society. It creates customers' uncertainty by preventing them from having a clear eco-friendly product option, which subsequently limits their ability to purchase sustainably (Braga Junior et al., 2019). Perceived greenwashing causes consumers who are concerned about the environment to hesitate when purchasing eco-friendly items and makes the purchasing process more challenging since they have to put out more effort to confirm the products' green claims. From the standpoint of the customer, perceived greenwashing is troublesome since it has a detrimental impact on green buying habits and consumer confidence in green products (Chen and Chang, 2013). According to Bulut et al., (2021) consumers who believe that greenwashing is occurring are less inclined to intend to buy green products, even if they are extremely worried about the environment. Additionally, when customers are strongly concerned about the environment, they are likely to

identify items that are either green or greenwashed (Bulut et al., 2021). Based on the literature of the study, greenwashing perception has a negative impact on green purchase intention where environmental concern has been considered as a mediator to see if there is any mediating effect of environmental concern on the relationship between greenwashing perception and green purchase intention. Thus, the following hypothesis was formulated.

H_4c: Environmental concern has a significantly negative impact on green purchase intention.

H_4d: Environmental concern has a significant mediating impact on the relationship between green-washing and green purchasing intention

5.3. Theoretical Framework:

The research framework is shown in figure 5.1

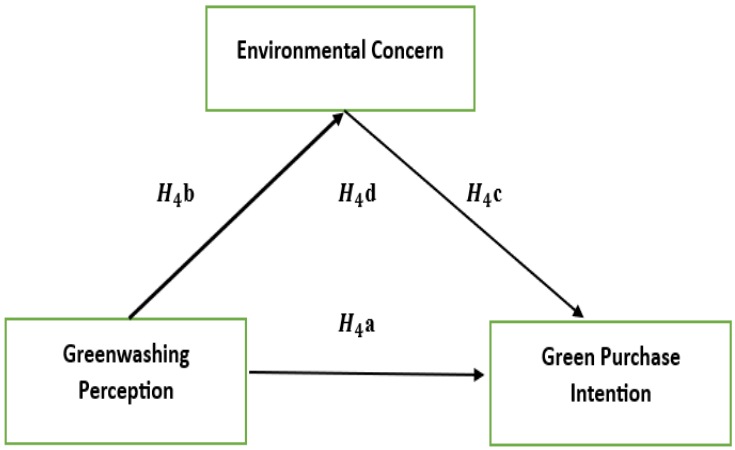

Figure 5.1: A research model and hypothesis

Table 5.1 presents the constructs along with their measuring items and the source from where they have been adopted. The measuring items for greenwashing perception have been adopted from Khandelwal & Sharma (2019), Junior et al., (2019) and Chen & Chang (2013) with some modifications whereas green purchase intentions measuring items were adopted from Rezai et al., (2012), Chiu et al., (2012) and Abdul- Muhmin (2007) and the measuring items for environmental

concerns were taken from Dunlap (2000) which is NEP (New Environmental Paradigm) scale for measuring environmental concern of consumers.

Table 5.1: Summary of Constructs and their Source

Sl.no	Statements	Source
Greenwashing perception	Fluffy language (words or expressions with two distinct meanings, for example, eco-friendly)	Khandelwal & Sharma (2019), Junior et al. (2019), Chen & Chang (2013)
	The great majority of green products "misrepresent" their genuine nature in order to appear greener than they are.	
	Imaginative images which misleads with visuals or graphic in its environmental features.	
	I am confident that the majority of green items deceive consumers.	
	This products possesses a green claim that is vague or seemingly un-provable	
	I'm confident that most green products are only green on the outside.	
Green Purchase Intention	I am still going to purchase green products even after knowing its greenwashing	Rezai et al. (2012) and Chiu et al. (2012) Abdul-Muhmin (2007)
	I am going to buy green products as they are easily available	
	Advertisement regarding green products influence me to buy	
	Even if its greenwashing i like the product as it fits my trend.	
	I will further suggest others to purchase	

	green products	
	I will also recommend others to purchase green products	
Environmental Concern	We're getting close to the limit of how many people the Earth can support.	Dunlap (2000)
	Citizens have a right to alter the natural environment in order to meet their own wants.	
	When humans intervene with nature, the results are frequently terrible.	
	Human ingenuity will ensure that the Earth does not become uninhabitable.	
	Humans are doing havoc on the ecosystem.	
	If we merely learn to enhance and develop natural resources, the Earth has plenty of them.	
	Plants and animals have the same right to life as humans.	
	The natural balance is powerful enough to withstand the effects of modern industrialised nations.	
	Humans are nonetheless subject to the rules of nature, notwithstanding our extraordinary skills.	
	The Earth is a spaceship with a finite amount of space and resources.	

Table 5.2: Mean, standard deviation value for variables

Sl.no	Statements	Mean	Std. Deviation
Greenwashing Perception	Fluffy language (words or expressions with two distinct meanings, for example, eco-friendly)	2.21	.859
	The great majority of green products "misrepresent" their genuine nature in order to appear greener than they are.	2.25	.901
	Imaginative images which misleads with visuals or graphic in its environmental features.	2.29	.900
	I am confident that the majority of green items deceive consumers.	2.19	.892
	This products possesses a green claim that is vague or seemingly un-provable	2.18	.868
	I'm confident that most green products are only green on the outside.	2.22	.909
Green Purchase Intention	I am still going to purchase green products even after knowing its greenwashing	3.73	1.047
	I am going to buy green products as they are easily available	3.75	1.088
	Advertisement regarding green products influence me to buy	3.78	1.114
	Even if its greenwashing i like the product as fits my trend.	3.82	1.050
	I will further suggest others to purchase green products	3.81	1.016
	I will also recommend others to purchase green products	3.32	.927

	We're getting close to the limit of how many people the Earth can support.	2.18	.922
	Citizens have a right to alter the natural environment in order to meet their own wants.	2.24	.950
	When humans intervene with nature, the results are frequently terrible.	2.04	.995
	Human ingenuity will ensure that the Earth does not become uninhabitable.	2.17	.930
	Humans are doing havoc on the ecosystem.	2.09	.959
Environmental Concern	If we merely learn to enhance and develop natural resources, the Earth has plenty of them.	2.09	.980
	Plants and animals have the same right to life as humans.	2.03	.980
	The natural balance is powerful enough to withstand the effects of modern industrialised nations.	2.13	.919
	Humans are nonetheless subject to the rules of nature, notwithstanding our extraordinary skills.	2.11	.885
	The Earth is a spaceship with a finite amount of space and resources.	2.20	.931

Source: *Author's Calculation*

5.4. Testing of hypothesis 4

Following are the hypothesis derived from the above literature which tested in this section:

H_4: Greenwashing has a significant impact on customer green purchase intention in the presence of environmental concern as a mediator.

H_4a: Greenwashing has a significant negative impact on green purchase intention.

H_4b: Greenwashing has a significant positive impact on environmental concern.

H_4c: Environmental concern has a significant negative impact on green purchase intention.

H_4d: Environmental concern has a significant mediating impact on the relationship between green-washing and green purchasing intention.

5.5. Structural Equation Modelling

Structural Equation Models are hypotheses that describe the connections between latent variables and observed variables as well as the relationships between the two. In the social sciences, structural equation modelling (SEM) is a robust multivariate analytical method that is often employed (González et al., 2008). Its applications extend from fundamental variable association analysis to sophisticated measurement equivalency evaluations for first- and higher-order constructs (Cheung, 2008). It offers an adaptable framework for creating and deciphering complex relationships between several variables, enabling researchers to use empirical models to evaluate the viability of theories. The capacity to regulate measurement error is one of the biggest advantages of using structural equation modelling (SEM).

5.5.1. Factor Loadings

Factor loading represents to what extent each of the items in the correlation matrix correlates with the underlying constructs. Factor loading ranges between -1 and +1, the higher value of the loading indicates that the variable correlates highly with the underlying factor (Pett et al.,2003) and if the correlation is negative, it indicates a negative correlation. According to Hair et al., (2016) loading should be higher than 0.50. In the study EC (environmental concern) has loadings of 0.770, 0.770, 0.837, 0.818, 0.833, 0.847, 0.793, 0.803, 0.801, and 0.774 respectively. GWP (greenwashing perception) has six items carrying loadings of 0.814, 0.834, 0.829, 0.868, 0.856, and 0.818 respectively. GWPI (greenwashing green purchase intention) has 6 items carrying loadings of 0.855, 0.918, 0.943, 0.913, 0.864, and 0.520

respectively. Hence, none of the items in the study has a factor loading of less than 0.5 and it was satisfactory. Factor loading are in the given table 5.3 below.

Table 5.3: Factor Loadings

	EC	**GW**	**GPI**
EC1	0.770		
EC2	0.770		
EC3	0.837		
EC4	0.818		
EC5	0.833		
EC6	0.847		
EC7	0.793		
EC8	0.803		
EC9	0.801		
EC10	0.774		
GWP1		0.814	
GWP2		0.834	
GWP3		0.829	
GWP4		0.868	
GWP5		0.856	
GWP6		0.818	
GPI 1			0.855
GPI 2			0.918
GPI 3			0.943
GPI 4			0.913
GPI 5			0.864
GPI 6			0.520

GWP= Greenwashing Perception, GPI= Green purchase intention, EC= Environmental Concern

Source: *Author's Calculation*

5.4.2. Reliability analysis

According to Mark (1996) reliability is stated as the extent to which a measuring instrument is stable and consistent. To ensure that each scale utilized in the study meets the study's needs and is appropriate for use in the study circumstances, a reliability analysis was conducted. When a scale produces consistent findings after being used several times or on different populations, it is said to be reliable. The two most commonly used method to assemble reliability is Cronbach's alpha and composite reliability. The composite reliability of construct scores should fall between 0.7 and 0.95, according to Hair et al., (2020). In the study the results for composite reliability for environmental concern is 0.948, greenwashing perception is 0.933, and green purchase intention is 0.937, hence all the values are acceptable. Additionally, according to George and Mallery (2003), there are five categories to use: "0.9 - Excellent, 0.8 - Good, 0.7 - Acceptable, 0.6 - Questionable, 0.5 - Poor, and 0.5 - Unacceptable." In the study the Cronbach Alpha for each of the variables is more than 0.9, environmental concern has Cronbach alpha of 0.940, greenwashing perception has a Cronbach alpha of 0.914 and green purchase intention has a Cronbach alpha of 0.915. Hence, all the values are excellent and acceptable.

Table 5.4: Construct Reliability Analysis (Cronbach's Alpha and Composite Reliability)

Constructs	Cronbach's alpha	Composite reliability
Environmental concern	0.940	0.948
Greenwashing perception	0.914	0.933
Green purchase intention	0.915	0.937

Source: *Author's Calculation*

5.5.3. Construct Validity

In PLS-SEM construct validity is stated when there is convergent validity and discriminant validity.

Convergent Validity

Fornell and Larcker (1981) state that the average variance extracted (AVE) must be more than 0.5, indicating the extent to which the underlying latent variable accounts for the variation in the indicators, the AVE is predicated on a reflective measurement model (Fornell and Larcker 1981). According to Hair et al., (2020), the AVE in PLS-SEM is calculated by averaging the indicator reliabilities. Convergent validity results based on the average variance extracted in the current study show that Environmental Concern has an AVE of 0.648, greenwashing perception has an AVE of 0.700, and green purchase intention has an AVE of 0.719. Hence, all the constructs satisfies the predetermined standard and the convergent validity is appropriate for the measurement model.

Table 5.5: Construct Convergent Validity (AVE)

Constructs	Average variance extracted (AVE)
Environmental concern	0.648
Greenwashing perception	0.700
Green purchase intention	0.719

Source: *Author's Calculation*

5.5.4. Discriminant Validity:

A reflective construct should have the strongest connections with its own indicators in the PLS path model, according to the discriminant validity evaluation (Hair et al., 2022). The idea is that if two or more ideas are distinct, a valid measure of each shouldn't have a strong correlation with the others Bagozzi et al., (1991). Discriminant validity is assessed by three methods.

a) Fornell-Larcker criterion
b) Cross Loading
c) Heterotrait - Monotrait Ratio (HTMT)

5.5.5. Fornell-Larcker criterion

The correlation between latent constructs and the square root of the extracted average variance (AVE) is compared using the Fornell-Larcker (1981) criteria. A latent construct ought to be more adept at explaining its own indicator's variation than the variance of other latent constructs. According to Hair et al., (2014), the correlations with other latent constructs should thus be less than the square root of the average variance extracted (AVE) for each construct. Table 5.6 displays the outcome, which reveals that the off-diagonal values indicate correlations across different constructs while the bold diagonal values reflect the square root of the average extracted variance. Square root (AVE) for constructs in bold was shown to be more correlated than other constructs. Environmental concern's square root of AVE (0.805) which is greater than (0.793 and - 0.665), Similarly greenwashing perception has square root of AVE (0.837) which is greater than (-0.750) and lastly green purchase intention has (0.848). Hence providing strong support for the establishment of discriminant validity.

Table 5.6: Discriminant validity: Fornell-Larcker criterion

Constructs	Environmental concern	Greenwashing perception	Green purchase intention
Environmental concern	**0.805**		
Greenwashing perception	0.793	**0.837**	
Green purchase intention	-0.665	-0.75	**0.848**

Source: *Author's Calculation*

5.5.6. Cross Loadings

In cross-loadings, the researcher looks at the different things to determine which have high loadings on one build and which have high loadings on several constructions. Since there is a strong correlation between items of the same construct and a very weak correlation between items of different constructs, discriminant validity at the item level must be established. The result in table 5.7 results shows that the factor loading of all the items loads well and is stronger in their underlying construct to which they belong to instead of other constructs in the study Wasko and Faraj (2005).

Table 5.7: Discriminant Validity: Cross Loading

	EC	**GWP**	**GPI**
EC1	**0.770**	0.660	-0.539
EC2	**0.770**	0.627	-0.542
EC3	**0.837**	0.630	-0.536
EC4	**0.818**	0.655	-0.563
EC5	**0.833**	0.645	-0.561
EC6	**0.847**	0.669	-0.557
EC7	**0.793**	0.593	-0.501
EC8	**0.803**	0.646	-0.539
EC9	**0.801**	0.643	-0.528
EC10	**0.774**	0.609	-0.480
GWP1	0.671	**0.814**	-0.596
GWP2	0.656	**0.834**	-0.612
GWP3	0.631	**0.829**	-0.641
GWP4	0.647	**0.868**	-0.653
GWP5	0.693	**0.856**	-0.655
GWP6	0.683	**0.818**	-0.609
GPI 1	-0.577	-0.649	**0.855**
GPI 2	-0.613	-0.719	**0.918**

GPI 3	-0.620	-0.705	**0.943**
GPI 4	-0.614	-0.690	**0.913**
GPI 5	-0.567	-0.633	**0.864**
GPI 6	-0.342	-0.338	**0.520**

GWP= Greenwashing Perception, GPI= Green purchase intention, EC= Environmental Concern

Source: *Author's Calculation*

5.5.7. Heterotrait - Monotrait Ratio (HTMT)

Through a Monte Carlo simulation analysis, Henseler, Ringle, and Sarstedt (2015) show the improved performance of this technique by contrasting it with the Fornell-Larcker criterion and the evaluation of (partial) cross-loadings**.** The acceptable range of discriminant validity is (<0.90) as recommended by Henseler et al., (2015). In table 5.8 the results revealed that all the values are less than 0.9 which is the required threshold. Hence measurement model has adequate convergent validity.

Table 5.8: Discriminant Validity: Heterotrait - Monotrait Ratio (HTMT)

Constructs	Environmental concern	Greenwashing perception	Green purchase intention
Environmental Concern			
Greenwashing Perception	0.855		
Green purchase intention	0.714	0.812	

Source: *Author's Calculation*

5.5.8. Structural Model

Following the assessment of the measurement model, the next step is the evaluation of structural path for the evaluation of path coefficients (relationships amongst the study constructs) and their statistical significance.

The results from the table 5.9 provides a direct indication that the desire to make green purchases is considerably impacted negatively by the notion of greenwashing. According to the findings, there is a negative correlation as the beta value (β= -0.601) is negative between the perception of greenwashing and the desire to make green purchases where the p value is significant (t= 11.23, p <0.001). Hence, the null hypothesis was rejected and the alternate hypothesisH_4awas accepted. Thus, greenwashing perception has a significant negative impact on green purchase intention.

From the table 5.9 below it is revealed that the greenwashing perception has significant positive impact on environmental concern of customer's indicating people with more awareness on greenwashing tends to be more environmental concern. According to the findings, there is a significant positive correlation between the path of greenwashing perception and environmental concern with beta value of (β= 0.793) and a significant p value (t= 32.738, p <0.001). Hence, the null hypothesis was rejected and alternate hypothesisH_4b was therefore accepted.

It has been revealed from the table 5.9 that green purchase intention is considerably impacted negatively by environmental concern indicating that customer with higher environmental concern tends to fail to trust the green product due to greenwashing awareness. The findings showed that the path between environmental concern and the desire to make green purchases had a negative beta value, (β= -0.188) and significant p value (t= 3.178, p = 0.001). Hence, the null hypothesis was rejected and alternate hypothesisH_4c was therefore accepted.

Table 5.9: Path Coefficients

Hypothesis	Paths	Beta Coefficient	Standard deviation	T statistics	P values
H_4a	**Greenwashing perception --> Green purchase intention**	-0.601	0.054	11.23	0.000
H_4b	**Greenwashing perception --> Environmental concern**	0.793	0.023	34.738	0.000
H_4c	**Environmental concern --> Green purchase intention**	-0.188	0.059	3.178	0.001

GWP= Greenwashing Perception, GPI= Green purchase intention, EC= Environmental Concern.

Source: *Author's Calculation*

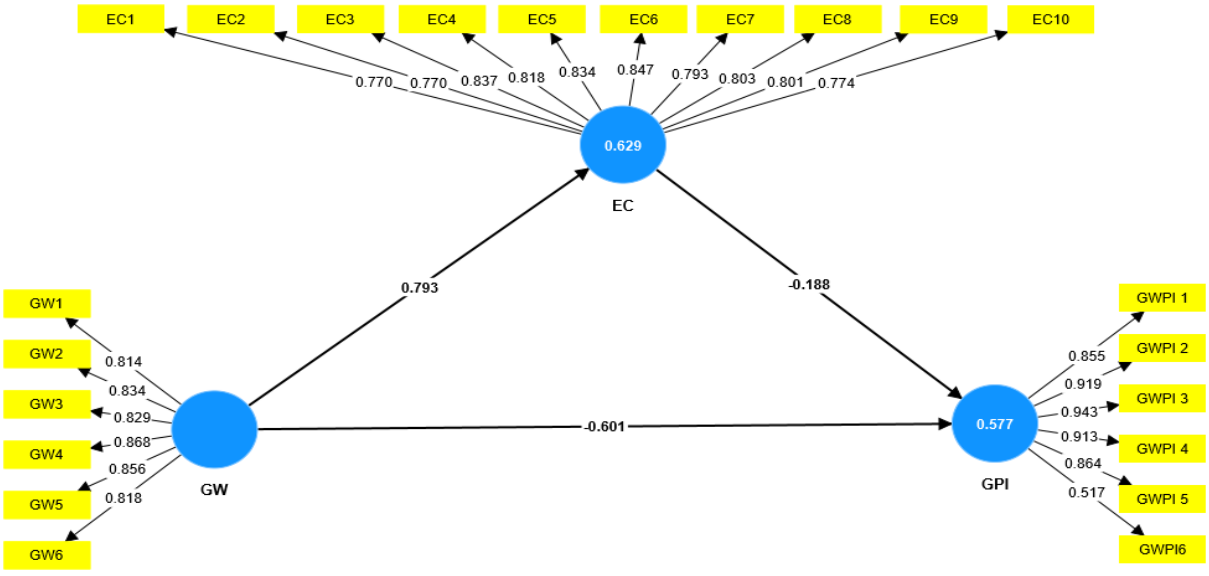

Figure 5.2: PLS/SEM Model.

5.6. Mediation Analysis

H_4d: Environmental concern has a significant mediating impact on the relationship between green-washing and green purchasing intention.

A mediation model in statistics includes a third explanatory variable, called a mediator variable, in order to determine and explain the framework or mechanism that supports an observed association between an independent variable and a dependent variable. In a mediational model, the independent variable causes the mediator variable, which in turn causes the dependent variable, as opposed to hypothesizing a direct causal link between the independent variable and the dependent variable. Determining the nature of the link between the independent and dependent variables is therefore made possible by the mediator variable. In other words, mediating connections exist when a third variable significantly influences how the other two variables relate to one another.

In the current study mediation analysis was used to analyse if environmental concern has a significant mediating impact on the relationship between green-washing and green purchasing intention. PLS-SEM bootstrapping was used to analyse the mediation as PLS-SEM has been found to be more effective than another mediation test like Sobel test (1982) and Baron and Kenny's (1986), as there were many limitations. Bootstrapping in PLS-SEM delivers every pertinent outcome with more precision and accuracy than PROCESS (Sarstedt et al., 2020).

A series of regression analysis was carried out to test the hypothesis if there was any mediation effect of environmental concern between greenwashing perception and the green purchase intention of the consumers. The results revealed that the greenwashing perception is negatively significant to green purchase intention (β= -0.751, t = 28.753, p <.001). This means consumer behaviour is negatively affected by greenwashing in the presence of environmental concern. Analysing the direct effects with the inclusion of a mediating variable which is environmental concern the impact of greenwashing perception (independent variable) on green purchase intention (dependent variable) is significant (β = -0.601, t = 11.230, p <.001), and greenwashing perception impacts negatively on green purchase intention. The perception of greenwashing is inversely correlated with consumers' propensity to purchase green items. Consumers may behave suspiciously and adversely comprehend the reasons behind the firm's hidden motives when they become aware of the disparity between corporate performance and green advertising (Delmas &

Montes-Sancho, 2010). The indirect effect of greenwashing perception on green purchase intention in the presence of environmental concern is significant (β= -0.149, t = 3.094, p = 0.001) this reveals that environmental concern partially mediates the relationship between greenwashing perception on green purchase intention which indicates that a portion of the effect of greenwashing perception on green purchase intention is mediated through environmental concern, whereas greenwashing still explains a portion of green purchase intention that is independent of mediator environmental concern. Here, the results implied a partial mediation, and it can be further classified as a complementary partial relation as the direct effect which is greenwashing perception on green purchase intention and the indirect effect which is greenwashing perception on green purchase intention in the presence of mediator environmental concern both are in the same direction which is a negative direction (Baron and Kenny, 1986). Hence, the null hypothesis was rejected and the alternate hypothesis H_4d was supported.

Table 5.10: Mediating Effect Results

Hypothesis	**Effect**	**Coefficient**	**Standard Error**	**T value**	**P value**	**Percentile bootstrap 95% confidence interval**	
						Lower	**Upper**
Greenwashing perception -> Environmental concern -> Green purchase intention	Direct	-0.601	0.054	11.230	<.001	-0.685	-0.510
	Indirect	-0.149	0.048	3.094	0.001	-0.232	-0.074
	Total	-0.751	0.026	28.753	<.001	-0.789	-0.702

Source: *Author's Calculation*

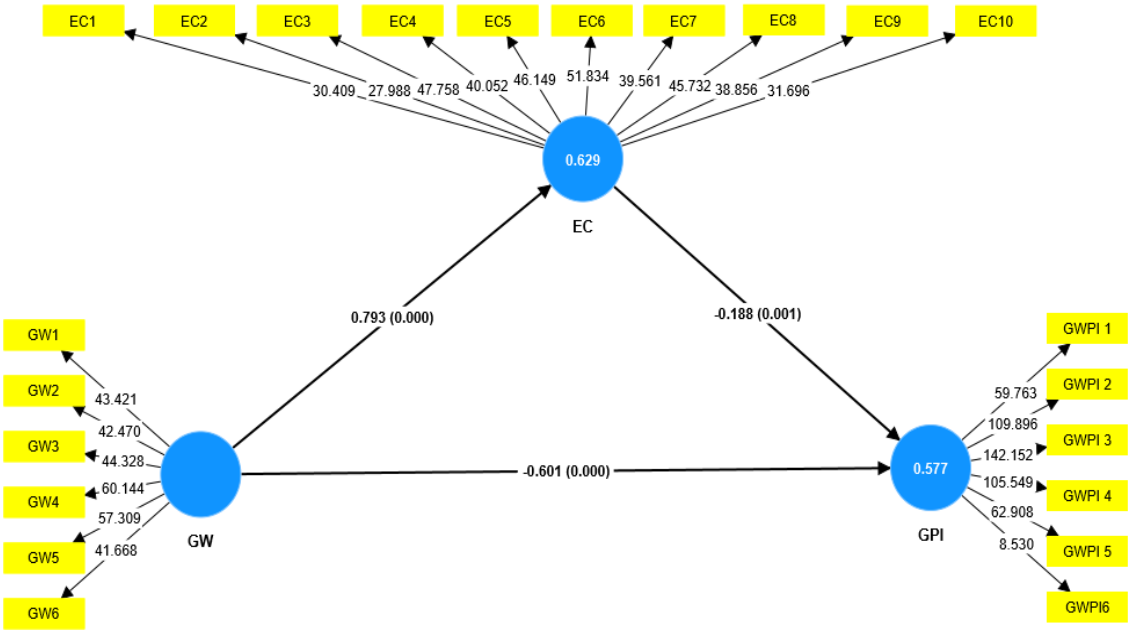

Figure 5.3: Mediation Model

Following Zhao et al., (2010), the bootstrap approach was used to quantify the mediation effect of environmental concern on greenwashing perception and green purchase intention. There were 353 original samples, and each time they were put back to draw 353 samples. The program was configured to repeat the sample 5000 times, with each sample being estimated thereafter to provide 5000 estimates. The 95% confidence level is specified and in the study the test reveals that the top and lower boundaries of the confidence interval don't include zero in between the confidence range, then mediation is present. In table 5.10 the results revealed that the upper bound and lower bound CI (L= -0.232, U= -0.074) do not include zero, which indicates environmental concern plays a negative mediating role between greenwashing perception and green purchase intention.

5.7. Conclusion:

It is evident that the direct effects with the inclusion of a mediating variable which is environmental concern the impact of greenwashing perception (independent variable) on green purchase intention (dependent variable) is significant and greenwashing perception impacts negatively on green purchase intention. These results are in lined with the study of Sun and Shi, (2022) where the findings indicated

that consumers' perceptions of greenwashing have a negative impact on their intentions to make green purchases, that perceived betrayal partially mediates this relationship, and that environmental responsibility enhances the negative impact of greenwashing perception on green purchasing intentions. Furthermore, the results found that the environmental concern of the consumer partially mediates the relationship between greenwashing and purchase intention. As, people with more environmental concern tends to identify greenwashing products more easily. This finding is compatible with the findings of Newell et al., (1998) who discovered that customers who recognized the advertisement as being "greenwashed" had a reduced desire to buy and thought the marketer was less trustworthy.

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Chapter -6

Summary of Findings and Suggestions

6.1. Introduction:

In this chapter, the major findings and recommendations are discussed for each of the chapters. The primary major conclusions that were extensively covered in the first section of the chapter are quickly summarized here for easier comprehension. In the last section of the chapter, along with the potential for further study, recommendations are made on how government, marketers, and customers could benefit from green marketing initiatives towards sustainability and also recommend a policy framework for checking the use of greenwash.

6.2. Chapter-wise summary:

6.2.1. Introduction:

a) Green marketing encompasses more than just advertising; it also includes things like the creation of eco-friendly products, the use of sustainable business practices, the use of eco-friendly packaging, and the development of marketing campaigns that highlight the products' environmental benefits.
b) A green product is one that is manufactured with non-toxic materials and ecologically friendly practices and has received certification from a reputable body. The most crucial component of the entire green marketing strategy and the cornerstone of the green marketing mix is the product.
c) Green promotion includes designing the instruments of publicity, such as ads, promotional material, posters, journal articles, web pages, brand management, product promotion, social media marketing and on-site promotions, visuals and demonstrations while keeping people, world and benefits in consideration.
d) Green promotion is the dissemination of accurate environmental information to customers who participate in a business' operations. Additionally, businesses safeguard natural resources in order to draw in their target market.
e) Distribution of greens is a very sensitive process. Customers must be assured of the product's "Ecological nature." When distributing green products, a high level of observance is necessary because the green environment is constantly controlled.

f) Green marketing should consider all these information into consideration when charging a higher price. The cost of organic product has to be reasonable for the consumer to promote purchase. Pricing of any green products has an effect in its demand. The argument that consumers are unwilling in paying more for a product labelled "green" is made in the book by Ottman (1997).
g) Consumers that care about the environment are very motivated and keen to buy ecologically friendly goods.
h) Consumer views of greenwashing not only have a negative direct influence on intentions to buy green products, but also have a negative indirect impact via green WOM.

6.2.2. Socio-Demographic and Perception Towards Green Marketing

a) The number of female respondents were more than the male respondents where females respondents accounts for 50.4% of the respondents while male respondents accounts for 49.6%.
b) It was found that the age group between18-25 are the highest number of respondents with 53.5% and the second highest are 26-35 age group with 32.3% respondents, 36 – 45 has 12.7% respondents and 45-55 has the least respondents with 1.4% and there were no respondents from the age of above 55.
c) It was found that majority of the respondents i.e. 89 respondents are from Silchar which accounts for 25.2 % of the total respondents. The second highest are the respondents belonging to Dibrugarh which accounts for 23.2%. The respondents belonging to Nagaon are in the third category which accounts for 20.1% followed by respondents from Tezpur which accounts for 17.6 % and the least percentage 13.9% of the total respondents were from Barpeta.
d) Most of the respondents were post-graduate with 40.7% and the second majority of the respondents were graduate with 40.5%, undergraduate were 10.8% of the respondents and respondents having Ph.D. degree are 7.9%.

e) Additionally, it was found that in the income (per month) majority of the respondents had an income of less than 20,000 with 32.6% and the second majority is 51,000 – 100,000 with 28.3%, followed by 21000 – 50000 with 26.3% of the respondents and lastly more than 100,000 is 12.7%.

f) It was found that most of the respondents were students with 63.5% of respondents and the second majority was service with 19% followed by businessmen with 17% and housewives 0.6%.

g) The study found that gender and their perception towards green products were very weak, correlation value (r_{pb}= .009, p = .864) was found between gender and preference towards green products. The relationship of gender with green price (r_{pb}= -.047, p = .381) is negatively correlated which means female perception is higher than male perception of green price and found not significant. The relationship of gender with green place (r_{pb}= -.047, p = .381) is negatively correlated and found not significant. It was found that the relationship of gender with green promotion (r_{pb}= -.053, p = .316) is negatively correlated and found not significant.

h) It was found that there is a weak and negative correlation between age and their perception of green products (r_s = -.127, p = .170), the p-value is insignificant. Since the correlation is negative it can be concluded that the younger age respondents have a positive response. The study revealed that the relationship between age and green price is negatively correlated (r_s = -.072, p = .180) there is no significant relationship between age and green price as the p-value is not significant. The relationship between age and green place is negatively correlated (r_s = -.072, p = .180) there is no significant relationship between age and green place as the p value is not significant. The relationship between age and green promotion is negatively correlated (r_s = -.068, p = .200) there is no significant relationship between age and green promotion as the p-value is not significant.

i) The study revealed that there is a negative correlation between education and their perception of green products (r_s = -0.001, p = .981), the p-value is insignificant. The relationship between education and green price is positively correlated which means as the level of education increases the

urge to pay more for green products also increases (r_s = 0.017, p = .746) but there is no significant relationship between education and green price as the p-value is not significant. The relationship between education and green place is positively correlated, inferring that as the level of education increases people are more concerned about availability of the green products (r_s = 0.017, p = .746) but there is no significant relationship between education and green price as the p-value is not significant. The relationship between education and perception of green promotion is negatively correlated (r_s = -0.026, p = .623), and the p-value is insignificant.

j) The study found that students are positively correlated with green products, green price, green place, and green promotion respectively, (r_{pb} = 0.082, r_{pb} = 0.054, r_{pb} = 0.054, r_{pb} =0.143) but the relationship between students and and green product, green price, green place and green promotion is not significant (p = 0.123, p = 0.31, p = 0.311, p = 0.137).

k) In the study it was found that people in services are negatively correlated with green products, green price, green place and green promotion respectively. (r_{pb} = -0.085, r_{pb} = -0.069, r_{pb}= -0.069, r_{pb} =0-.116) Only 19% (67) of respondents are in service occupation. The relationship between service as occupation and green product, green price, green place and green promotion is not significant (p = 0.112, p = 0.195, p = 0.195 and p = 0.129).

l) According to the study there were only 2 respondents who were housewives (.6%) and there was a negative correlation value towards perception of green product, green promotion (r_{pb} = -0.039, r_{pb} = -0.051), whereas green price and green place show a weak but positive relationship (r_{pb} = 0.005, r_{pb} = 0.005).

m) There were 17% of respondents who were into business and their relationship with green product and green promotion are negatively correlated (r_{pb} = -0.009, r_{pb} = -0.052) and green price and green place are found to be weak but positive relationship (r_{pb} = 0.002, r_{pb} = 0.002).

n) The study revealed that there is a weak and negative correlation between income and their perception towards green products indicating that as income increases the need for green product decreases (r_s = -0.09, p = 0.09), the p-value is not significant. The relationship between income and green price is positively correlated which indicates as the income increases the urge to pay more increases (r_s = 0.081, p = 0.13), the p-value is not significant. The relationship between income and green place is positively correlated (r_s = 0.081, p = 0.13), the p-value is not significant. The relationship between income and green promotion is positively correlated which indicates as the income increases the consumers are more aware towards green promotion (r_s = 0.015, p = 0.778), whereas the p-value is not significant.

6.2.3. Green Marketing and Purchase Intention

a) The correlation test between the green marketing mix and the purchase intention of consumers revealed that there is a substantial connection between the independent factors and the dependent variable which is revealed by the two-tail test's results at 0.01 significant levels. The results revealed that green product, green price, green promotion, green place are positively related with green product purchase intention.
b) In case of the effect of green product on green product purchase intention of the consumer, the significant and positive results revealed that green product has a positive impact on green product purchase intention (β= .176, t = 1.971, p = 0.049).
c) Additionally, the study evaluated whether green price has a significant positive impact on green product purchase intention or not. The results implied that green price has a significant and positive impact on green product purchase intention (β = .530, t = 4.345, p < .001).
d) Furthermore, the study also revealed that green place has a significant and positive impact on green product purchase intention (β = .331, t = 2.348, p = 0.019).

e) In case of whether green promotion has a significant positive impact on green product purchase intention or not, the findings showed that intentions to acquire green products are significantly and positively impacted by green promotion. (β= .418, t = 3.581, p < .001).
f) The study also further implies that the factor green price (β=.530) and green promotion (β = .418) has utmost significant positive impact on green product purchase intention.
g) Moreover, the findings indicates that green marketing mix significantly impacted green product purchase intention (p<.001) which indicates green marketing mix has significant potential to influence the customer green product purchase intention (β= 0.692, t = 17.979). Moreover, R^2 = 0.478, depicts that the model explains 47.8% of variance in green product purchase intention.

6.2.4. Green Marketing and Environmental Concern

a) The correlation test between green marketing mix and environmental concern revealed that there is a substantial connection between the independent factors and the dependent variable which is revealed by the two-tail test's results at 0.01 significant levels. The results revealed that green product, green price, green promotion, green place are positively related with environmental concern.
b) From the study it was found that green product has a significant and positive impact on environmental concern of consumers (β= .465, t = 6.104, p <.001), indicating customer's perception towards green product has a positive impact on their environmental concern.
c) In case of evaluating whether green price has a significant positive impact on environmental concern or not, the results revealed that green price has a significant and positive impact on environmental concern on (β= .519, t = 3.765, p < .001), which means customer's perception towards green price has a positive impact on their environmental concern.
d) The study further evaluated whether green place has a significant positive impact on environmental concern or not. The results revealed that green place

has a significant and positive impact on environmental concern (β= .254, t = 2.052, p = 0.041), indicating that customer's perception towards green place has a positive impact on their environmental concern.

e) In case of effect of whether green promotion has a significant positive impact on environmental concern. The results revealed that green promotion has a significant and positive impact on environmental concern (β = .839, t = 6.273, p < .001), which means green marketing campaigns educate the customer more about the environment and customer's perception towards green promotion has a positive impact on their environmental concern.

f) The findings further indicates that green marketing mix significantly impacted environmental concern (p<.001) which indicates green marketing mix has significant potential to influence the customer's environmental concern (β= 0.809, t = 25.782). Moreover, R^2 = 0.653, depicts that the model explains 65.3% of variance in environmental concern.

6.2.5. Greenwashing Perception and Green Purchase Intention: Environmental Concern as Mediator

a) The results of the study revealed that the Beta value pertaining the relationship of greenwashing perception and green purchase intention turns out to be negative i.e. (β= -0.601, t= 11.23, p <0.001), indicating that the consumers have a negative perception on greenwashing and it leads to negative purchase intention.

b) The study further evaluated whether greenwashing perception has a positive impact on environmental concern. The results revealed that the Beta value pertaining the relationship of greenwashing perception and environmental concern turns out to be positive i.e. (β= 0.793, t= 32.738, p <0.001), which means that increase in greenwashing perception leads the consumers to be more environmental concern.

c) The results further revealed that the Beta value pertaining the relationship of environmental concern and green purchase intention turns out to be negative i.e. (β= -0.188, t= 3.178, p =0.001), indicating as consumers know more

about greenwashing, they tend to doubt the green marketing or green product ultimately resulting in negative purchase intention.

d) A series of regression analysis was carried out to test the hypothesis if there was any mediation effect of environmental concern between greenwashing perception and the green purchase intention of the consumers. The total effect was tested and the results revealed that the greenwashing perception is negatively significant to green purchase intention (β= -0.751, t = 28.753, p <.001). This means consumer behaviour is negatively affected by greenwashing in the presence of environmental concern.

e) The direct effects with the inclusion of a mediating variable which is environmental concern the impact of greenwashing perception (independent variable) on green purchase intention (dependent variable) is significant (β = -0.601, t = 11.230, p <.001), and greenwashing perception impacts negatively on green purchase intention. The perception of greenwashing is inversely correlated with consumers' propensity to purchase green items.

f) The indirect effect of greenwashing perception on green purchase intention in the presence of environmental concern is significant (β = -0.149, t = 3.094, p = 0.001) this reveals that environmental concern partially mediates the relationship between greenwashing perception on green purchase intention which indicates that a portion of the effect of greenwashing perception on green purchase intention is mediated through environmental concern, whereas greenwashing still explains a portion of green purchase intention that is independent of mediator environmental concern. the results implied a partial mediation, and it can be further classified as a complementary partial relation as the direct effect which is greenwashing perception on green purchase intention and the indirect effect which is greenwashing perception on green purchase intention in the presence of mediator environmental concern both are in the same direction which is a negative direction (Baron and Kenny, 1986).

6.3. Suggestions

The following recommendations were made based on the researcher's distinct findings, and the examination of both primary and secondary data.

Suggestions to the Marketers:

a) The marketers by using personal selling can actively educate consumers about the advantages of green products. Salesmanship also aids in demonstrating green products to customers and promptly addressing their concerns. In order to target the consumers and strengthen the brand image, businesses might emphasize environmentally friendly packaging in their advertising materials.

b) To raise customer awareness, businesses could organise environmentally friendly initiatives. Other stakeholders, including as workers, suppliers, shareholders, etc., might also be the subject of such programmes. Through the media and ads, consumers are becoming more aware of environmental concerns and climate change. Both new and established firms now have a chance to invest in environmentally friendly goods.

c) When compared to non-green items, green products are often more expensive because of the high cost of the raw ingredients. Companies that produce green goods can identify replacement raw materials with lower costs in order to lower the price of green goods.

d) Simultaneously according to the study's findings, companies who engage in greenwashing will leave a bad image on consumers, which will convert into less purchase intentions through word-of-mouth. Similar to this, customers' environmental awareness will be important when evaluating any company's green promises. Therefore, from two perspectives, the study's findings are significant for marketers. The first perspective involves actually developing programmes, plans, and strategies to save the environment. The second perspective depicts their environmental initiatives and activities favorably while avoiding hyperbole and fabrication.

e) Customers are considerably more informed and has access to a variety of sources to verify any company's green claims. Based on the findings of the study green marketing perception of consumers has a significant impact on their environmental concerns. So, marketers are more responsible in their part to educate the consumers more towards an increase in the environmental concern of consumers by providing proper eco-labels, providing green certification, informative advertising regarding the environment, providing better product description etc.

f) The growth and development of a corporation is contingent upon the purchasing intentions of its customers. As a result, further steps should be made to ascertain the customers' intended purchases. Knowing this allows a business to adjust its production practices to better serve customers. The company's ultimate objective should be to satisfy its customers. A corporation should alter the components in its goods if it discovers that they are not regarded as green products. Furthermore, the final goal of all business sector activities should be favorably centered around the purchasing intents of customers and environmental concerns.

Suggestion to the Government:

a) There is a lack of policy regarding green products in India and the government should take necessary steps to implement certain policies by setting up specific boards and committees to look after the working of the companies.

b) The government could take action to create rules concerning "going green" by requiring businesses to use green routes of distribution and renewable sources of energy, which would result in cost-effectiveness for the concerned organizations. The movement against consumerism on environmental problems has to be boosted. Employees should take the lead in creating a green workplace and demand that management create green environmental policies for their businesses' immediate surroundings in addition to their places of employment.

c) India is recognized for its herbal goods, thus the government may support MSMEs by providing subsidies for the manufacturing and marketing of herbal products. The Government can impose high taxes to limit the massive entry of synthetic products by MNCs into the Indian market. Government may use subsidies and tax breaks to support green goods manufacturing.

d) Since the study has confirmed that the perception of consumers towards green marketing mix can influence their green purchase intention positively, that means people are more aware towards the harm caused to the environment and wanted to shift to green products. Government can direct the companies to take this opportunity and initiate proper promotion of the product to guide the customers, make proper pricing policy regarding the price of the green products, make proper distribution and make manufacturing unit near to the market area and lastly to meet the standard manufacturing process and ingredients in the production of green products. The government can penalize a corporation and forbid the use of dangerous raw materials or any goods that have undergone animal testing.

e) As there is an increase in greenwashing activities of the companies, and from the results it has been confirmed that greenwashing perception of consumers affects their purchase intention of green products, and leads to decrease in purchase of green products due to lack of trust. Therefore, the government needs to control such practices which are used to deceive the customer and a checking board needs to be set up, they can sue and ban advertisements for over dubious claims. As 79% of the green promises made in advertising in India are false or inflated, according to different research by the Advertising Standards Council of India (ASCI).

f) The absence of regulations is one of the factors contributing to India's high level of greenwashing. Companies are able to make false or deceptive statements about the environment in India without facing any repercussions since there are no explicit rules that govern such claims. Government should penalize the companies involved in such activities.

g) The government need to encourage researchers who are enthusiastic to look for fresh viewpoints on environmental issues. The goal of the research should

be to support green customers and environmental concerns. The primary goal of the study should be to determine how a consumer might avoid the greenwashing tactics used by the business. Environmental non-governmental organizations should also be supported in their efforts to speak out for underprivileged customers. Businesses should conduct more study to determine how to provide consumers with environmentally friendly products.

h) Government should also take the opportunity to educate the consumers regarding green products and its advantages, as its peak time for people to go green and save the environment. As now it's the digitization era digital media can be used to pass the information and educate the consumers.

Suggestions to the Customers:

a) Many a times consumers fall into greenwashing due to false claims, consumers should always should try to analyze the product and the advertisement properly before making an investment. It is advised that customers carefully consider the complaints made against advertising and their promises to be informed about the offered goods.

b) It can be seen from the findings that demographics of the consumers mostly are not significant to their perception towards green marketing mix, they should educate themselves and try to investigate the advantage and disadvantage of the green products,

c) Going green should be the only motive for everyone in the society, consumers should gain more environmental knowledge so that they can understand the urge to purchase green products that are less harmful to the environment.

d) Customers should always ask about the green attributes of the product while purchasing it. They should always have a clear picture of the harmfulness or advantage of the product while making purchase.

6.4. Scope for Future Research:

a) The current study focuses on consumers from Assam itself, further studies can be done by taking more consumers from different geographical area.

b) The study found that the environmental concern of consumers also affects their purchase decision, similarly, there can be various other factors that may influence their purchase intention for green products further studies can contribute to find other factors.
c) A comparative study can be done by taking the rural and urban consumers and analyzing their responses about the green product and greenwashing.
d) In the study only environmental concern has been taken as a mediator between greenwashing perception and purchase intention, there are other mediating factors like demographics, Word-of -Mouth etc which can be taken into consideration.
e) Only green items in general have been taken into consideration in this investigation. For particular product categories like electronics, cars, food, etc., the outcomes may differ.
f) It is also recommended to conduct research on psychographics and green marketing, since this might help guide segmentation and targeting choices.

6.5. Conclusion

Green marketing delivers a platform for environmentally friendly consumption. It is now crucial for businesses to embrace sustainable development without endangering the environment. The impact of all the 4 P's of green marketing significantly impacts the green product purchase intention and environmental concern of the customers so the businesses need to take care that all the P's are satisfied towards the need of the customer keeping in mind the perception of customer towards it. Along with it the study also confirms that greenwashing perception of the customer have a negative impact on their purchase intention so the companies should avoid such of false claims made to the customer furthermore as environmental concern mediates the relationship between greenwashing perception and purchase intention which indicates that people with more environmental concern keeping in mind the greenwashing factor they will have less tendency to purchase green product due to lack of trust.

Appendix - I

Questionnaire

Customer Perception Towards Sustainable Green Marketing: An Empirical Study with Reference to Assam

Dear Respondents,

I, the undersigned, am a bona fide research scholar in Department of Management, Mizoram University, Aizawl. I am pursuing my doctoral degree under the title "Customer Perception Towards Sustainable Green Marketing: An Empirical Study with Reference to Assam".

For the purpose of my research work I need some information regarding the influence of emotions on consumer behaviour. The research is carried out in pure academic interest and the collected data will be used only for research and academic purpose. So I request you to kindly fill up the questionnaire. Thank you for spending your precious time in completing this questionnaire.

Thank You

Sincerely

Priyanka Mahanta

Research Scholar

Department of Management

Mizoram University

Phone no - 8399094797

Instructions:

Please carefully read all the questions and statements, complete the area available, tick the relevant boxes, and circle just one answer from each statement.

Background Information

1. Name: _____

2. Age:

1) 18-25 ☐ 2) 26-35 ☐
2) 36-45 ☐ 4) 46-55 ☐
5) 56 and above ☐

3.District:

1) Dibrugarh ☐ 2) Nagaon ☐
3) Sonitpur ☐ 4) Cachar ☐
5) Barpeta ☐

4. Gender:

1) Male ☐ 2) Female ☐

5. Educational Level:

1) Under Graduate (e.g. H.S.C, S.S.C) ☐
2) Graduate (e.g. B.A., B.Com, B.Sc.) ☐
3) Professionals ☐
4) Post Graduate (e.g. M.com, M.A, M. Sc.) ☐
5) Ph.D ☐

6. Occupation:

1) Student ☐ 2) Service ☐
3)Housewife ☐ 4) Businessman ☐

5)Retired ☐

7. Monthly family Income:

1) Less than 20,000 ☐
2) Rs. 21,000 to 50000 ☐
3) Rs. 51,000 to Rs. 1,00,000 ☐
4) More than Rs. 1,00,000 ☐

8. Green marketing mix consumer perception

Green product

Sl.No	**Statements**	**Strongly agree (1)**	**Agree (2)**	**Neutral (3)**	**Disagree (4)**	**Strongly disagree (5)**
1	I prefer eco-friendly products over non-eco-friendly products					
2	Eco friendly products are valuable to the society					
3	Eco-friendly products consumption will not harm our health					
4	Eco friendly products will not create pollution in our environment					
5	Purchasing eco-friendly products will contribute to sustainable future					

9. Green Price

Sl. No	Statements	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
1	Eco friendly products are highly priced					
2	I am willing to pay more for eco-friendly products					
3	The price of the products is normal					
4	The benefit of green product are justified by price.					
5	For premium green products the price will also be premium					

10. Green Place

Sl. No	Statements	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
1	Green products are easily available					
2	I don't need to go a long way for					

	purchasing of green products					
3	Environmentally friendly products are offered by prestigious vendors/ marketers.					
4	The company (x) is eager to work with agents that are environmentally conscious.					
5	The company's have done proper distribution of green products.					

11.Green Promotion

Sl. no	**Statements**	**Strongly agree (1)**	**Agree (2)**	**Neutral (3)**	**Disagree (4)**	**Strongly disagree (5)**
1	Environmentally friendly marketing are beneficial to society.					
2	Employees of green products companies advise customers on how to use their products not to harm the environment.					

3	Green product companies contribute to supporting environmental centers.					
4	Green promotional strategies are effective when used by green businesses.					
5	I enjoy commercials that provide information about environmentally responsible items.					

12. Purchase Intention

Sl.no	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	In future, I want to look for environmentally friendly things to buy as it is less polluting.					
2	I'll spend more time looking for ecologically friendly alternatives to the things I regularly purchase in the future.					
3	I'm going to spend some time browsing business websites to find out more about green solutions.					
4	I am ready to pay more for					

	green products					
5	If advertisements are used to explain the green product it may influence my decision to purchase.					
6	I will also recommend others to purchase green products.					

13. Greenwashing (It is a practice where company deceive the customer in the name of green marketing or making false claims)

Sl.no	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Fluffy language (words or expressions with two distinct meanings, for example, eco-friendly)					
2	The great majority of green products "misrepresent" their genuine nature in order to appear greener than they are.					
3	Imaginative images which mislead with visuals or graphic in its environmental features.					
4	I am confident that the majority of green items deceive consumers.					

5	This product possesses a green claim that is vague or seemingly un-provable					
6	I'm confident that most green products are only green on the outside.					

14. Purchase intention after being knowing about greenwashing practices

Sl. No	**Statements**	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1	I am still going to purchase green products even after knowing its greenwashing					
2	I am going to buy green products as they are easily available					
3	Advertisement regarding green products influence me to buy					
4	Even if its greenwashing i like the product as fits my trend.					
5	I will further suggest others to purchase green products					
6	I will also recommend others to purchase green products					

15. Environmental Concern

Sl.no	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	We're getting close to the limit of how many people the Earth can support.					
2	Citizens have a right to alter the natural environment in order to meet their own wants.					
3	When humans intervene with nature, the results are frequently terrible.					
4	Human ingenuity will ensure that the Earth does not become uninhabitable.					
5	Humans are doing havoc on the ecosystem.					
6	If we merely learn to enhance and develop natural resources, the Earth has plenty of them.					
7	Plants and animals have the same right to life as humans.					
8	The natural balance is powerful enough to withstand the effects of modern industrialised nations.					
9	Humans are nonetheless subject to the rules of nature, notwithstanding our extraordinary skills.					
10	The Earth is a spaceship with a finite amount of space and resources.					

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Book Chapters:

- Sharma D., Mahanta P., (2021). **A study on the Green Initiatives by ICICI Bank Towards a Sustainable Development** in Singh,A.K., Mahanta, P., (2022) Green Marketing and Sustainable Development. Mittal Publications, New Delhi, pp 201-208 (ISBN 978-93-90692-97-2)

- Uzir K., Mahanta P., (2021). **A study on Green Marketing Strategy in Sustaining the Tourism Sector,** Singh, A.K., Mahanta,P.(2022) Green Marketing and Sustainable Development. Mittal Publications, New Delhi, pp 201-208 (ISBN 978-93-90692-97-2)

- Mahanta P., Singh A.K., Vanllalhriati C., (2022**). Green Marketing: A Modern Shift to Slacken Climate Change**, Singh, A.K., Mahanta,P., (2022) Green Washing and Climate Change. Mittal Publications, New Delhi, pp 105- 110 (ISBN 978-93-94569-50-8).

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ABSTRACT

CUSTOMER PERCEPTION TOWARDS SUSTAINABLE GREEN MARKETING: AN EMPIRICAL STUDY WITH REFERENCE TO ASSAM

AN ABSTRACT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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CUSTOMER PERCEPTION TOWARDS SUSTAINABLE GREEN MARKETING: AN EMPIRICAL STUDY WITH REFERENCE TO ASSAM

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In partial fulfillment of the requirement of the Degree of Doctor of Philosophy in Management of Mizoram University, Aizawl.

1.1. Introduction

Due to the ever-increasing constraint of the resources that are required to generate products and services, societies currently are facing major challenges related to sustainable consumption and production (the twelfth SDG). According to Chen and Chai (2009) and Liu et al., (2016), the linear economy and culture of waste are to blame for resource depletion, climate change, and environmental pollution. No longer customers are final link in the manufacturing process. Contrarily, by restoring, recycling, or utilizing supplies in new production cycles within the circular economy framework, customers can play a critical part in ending the cycle (UN, 2015). Customers' perception towards marketing has changed and increased considerably across the world on environmental issues, such as global warming and carbon emissions, has now become global issues (Shirsavar & Fashkhamy, 2013) and various steps are being taken to shift towards “green” to protect the environment. In today’s world, both advertisers and buyers are highly receptive to the need for green goods and services. For the entire earth and human beings, environmental issues are still the biggest concern. The major environmental issues that have arisen so far, alongside human activities, are carbon emissions, conservation consequences and ecological imbalances (Sharma, 2011). A few of the major concerns with the field of green marketing is that no effort has been made to analyse environmental or sustainable marketing academically. In the current market, green marketing is a concept that has become increasingly relevant. This idea has allowed existing goods to be re-marketed and packaged (Bhattacharjee &Mukherjee, 2015). Green marketing emphasizes on environmentally friendly goods to fulfil customers' expectations and desires (Akhil et al., 2016).

Businesses realizes that offering goods and services that meet customers' environmental concerns will increase the probability that those customers will choose their goods or services (Kang & Hur, 2011). Companies must find ways to improve their products' environmental credentials in this new environmental era in order to build brand equity (Chen, 2010). In other words, corporations must take the initiative to adopt sustainable marketing techniques, such as green marketing (Gordon et al., 2011; Martin &Schouten, 2012). In order to highlight the issues of

global warming in the twenty-first century, green marketing has consequently developed as the new marketing philosophy accepted by customer groups wanting ecologically friendly products. Additionally, to understand how the customer behaviour is rapidly changing, it is necessary to continuously examine and investigate the current market trends.

Companies will have to significantly boost their green marketing strategies (Kotler, 2011), since it is no longer a way of making business look better in terms of marketing its products to the green customer, it's becoming a necessity for companies to be more Earth-friendly in their techniques. A range of different factors can be involved in green marketing such as creating a sustainable and environment-friendly product, using eco-friendly packaging, incorporating sustainable business models, or concentrating marketing strategies that convey the green value of a product. However, the most important part of green marketing is that they tend to get a competitive advantage for the environmentally friendly products in the market against the non-environmental friendly products, as the green brands get more attention and it has been empirically found that using auditory features can stimulate the greenness of the brand and achieve the desired market (Joshi &Kronrod, 2020). As it is generally a belief, that green marketing mostly consists on the promotion and advertising of goods with ecologically friendly attributes. Mahmoud, (2019) defines green marketing as the interchangeable application of the four marketing mix components (product, price, promotion, and distribution) till the sale of goods and services that offer better environmental benefits like reduced waste, increased energy efficiency, and/or low toxic emissions.

1.2. Operational Definitions:

Green Marketing:

Paco & Raposo, (2010) defined green marketing as "the holistic management process responsible for identifying, anticipating, and satisfying the desires of customers and society as a whole in a profitable and environmentally friendly way."

In other words, it is the procedure for planning, executing, and overseeing the production, estimating, costing, advertising, and distribution of products. It focuses

on meeting specific criteria, such as customer needs, organisational goals, and integration with ecosystems (Fuller, 1999).

According to American Marketing Association "green marketing is the marketing of products that are considered to be environmentally safe".

Greenwashing:

According to Delmas and Colgan (2018), "greenwashing" is the technique of deceiving customers about a company's environmental policies or the environmental advantages of a good or service.

The technique of deceiving customers about an organization's environmental policies (known as "firm-level greenwashing") or the advantages an item or service has for the environment (known as "product-level greenwashing") is referred to as "greenwashing." (Delmas & Burbano, 2011).

Green purchase intention:

Green purchase intention, according to Fandos and Flavian (2006), is a customer behaviour planned ahead of time to make future purchases. Prior to making actual purchases, shoppers base their decisions on their purchasing intentions (Pandey & Srivastava, 2016).

Environmental Concern:

Environmental awareness has emerged as a key indicator for analysing ecological behaviour (Joshi, 2017, Landry et al., 2018). In most cases, it has an indirect influence on customer behaviour through elements including views, arbitrary norms, and the impression of behavioural control (Zhang & Luo, 2021). Using the Behavioural Reasoning Theory (BRT), Chen et al., (2021) divided environmental worry into three categories: egoistic concern, altruistic concern, and biospheric concern.

Customer Perception:

Customer perception is defined as “the process via which a person learns about their surroundings and applies that knowledge to meet their wants, demands, and attitudes.” (Crane & Klarke, 1994; Harrell& G.L. Frazier, 1998).

1.3. An overview of green marketing

The concept of green marketing was first introduced in the late 1980s, despite some attention being given to it in the 1970s. It started in Europe in the early 1980s when it was recognized that some manufactured goods were bad for the environment.Since then, there have been three phases of green marketing the first phase is ecological marketing, the second phase is known as environmental marketing and the last phase is known as sustainable marketing (Mishra& Sharma, 2014; Zampese et al., 2016; Lazar,2017; Papadas et al., 2017).

First Phase (Ecological Marketing): During the first phase, it mainly focused towards the harmful chemical industries releasing harmful and toxic waste to the environment. As all the marketing activities should be directed towards healing the environment, although it was not much successful but it received awareness from the government regarding safety of the environment. Green marketing has been acknowledged by the government as "a form of response to environmental activism"(Zampeseet al., 2016).

Second Phase (Environmental Marketing): During the second phase in 1980’s, the marketers concentrated on renewable technologies for creative product design, emissions reduction and waste reduction (Lazar, 2017). Especially in comparison to the ecological process, the environmental period was not confined to resource use, but captured environmental threats, such as habitat degradation, and species extinction. This phase does covered chemical toxic industries and it also included electronic, tourism industry, cloth industry, etc. During this period, most businesses faced challenges in ensuring the greenery and characteristics of goods, customers showed mistrust for green initiatives. The ideology of clean technology arose because of the incidence of adverse environmental disasters.

Third Phase (Sustainable Marketing): During the third phase in 2000's, it mainly focused on having an impact on the natural environment. The stage of sustainability introduces a special manufacturing and consumption necessity: to assure that the existing material quality is met and that the life of the future is not detrimental (Peattie, 2001). Green marketing receives planning ahead in many businesses at a sustainable stage. The aim of sustainable marketing poses new challenges for companies in different industries: direction towards the future, fairness, and focus on needs (Katrandjiev, 2016).

1.3.1. Green marketing mix

There are 4P's for the green marketing mix. These 4 P's are integrated in such a way to satisfy the need of the customers as well as to provide environmentally friendly products to the customers. The development and advertising of items that are intended to be ecologically friendly is known as "green marketing." It is a distinct type of marketing where products and services are advertised based on how good they are for the environment. The term "green" is used to describe the items whose manufacturing does not harm the environment in any way, and whose ingredients and packaging are environmentally friendly. Green marketing encompasses more than just advertising; it also includes the creation of eco-friendly products, the use of sustainable business practices, the use of eco-friendly packaging, and the development of marketing campaigns that highlight the products' environmental benefits. However, it is a challenge for the marketers as it depends on how creatively they can use the 4 P's and every company has their own marketing mix.

Green Product - In recent years, marketers have used terms like "green products," "organic," "ecologically responsible," and "ecological" to inform and entice customers (Gosavi, 2013). Green products serve to promote sustainable development and lessen pollution by not causing harm to the environment. Green products safeguard the environment and address environmental issues while conserving energy or resources, limiting the use of harmful items, reducing emissions, and eliminating pollutants (Ottman et al., 2006). According to Ghodeswar (2015), a green product is one that is manufactured with non-toxic materials and

ecologically friendly practices and has received certification from a reputable body. The product serves as the foundation of the green marketing mix and is the most significant component of an overall green marketing strategy. But keeping in mind that every component of the product—the materials utilised, the manufacturing process, the packaging, etc. are considered a part of a green product (Fan & Zeng, 2011). A green product is one that performs the same tasks as a comparable conventional product but does less environmental harm over the course of its life cycle.

Green Price- Price is the value that the customer pays for the product. Green pricing thus relates to pricing of green products i.e. environmentally friendly and there is an increase in the value of the product just because of its green factor. Environmentally sustainable goods, moreover, are less costly when product life cycle costs are considered. All of these details should be taken into account by green marketers before raising prices. For customers to be encouraged to buy green products, the price must be fair. Demand for any green product is influenced by its price (Xu et al., 2017). The book by Ottman (1997) makes the case that buyers won't pay extra for a product that is designated as "green". As a result, marketers need to give the product's pricing top attention (Khan, 2012). As price is the only factor that can completely balance revenue and profit as all other P's in green marketing leads to expenses. As per Hashem and Al-Rifai (2011), "green pricing" is a pricing strategy that takes into consideration a business's environmental practises, as required by regulations, company guidelines, or initiatives in this domain. Green pricing takes into account the needs of the people, the environment, and business in a way that promotes efficient production while safeguarding the health of employees and communities. Among other things, the value may be raised by changing its emergence, utility, and customization (Shil, 2012).

Green Place (distribution) - In order to reduce transportation emissions and thus the carbon footprint, green places manage logistics more efficiently (Shil, 2012). It basically refers to have a warehouse or logistic in nearby so that transportation is reduced to limit the emission of carbon. Place represents the location where a product may be purchased. This can include both a physical and an online shop.

Material should be sent to the relevant distributors, which should be directly and conveniently situated in an environmentally safe area with no emissions. The option as to where and when to enable a commodity available by a business, would have considerable effect on the customers. Less customers may go out of their way to buy green goods (Sharma, 2011). The method of distributing green is quite delicate. Customers need to be guaranteed that the item is "ecologically nature". When distributing green products, a high level of observance is necessary because the green environment is constantly controlled (Yazdanifard & Mercy, 2011).

Green Promotion- Designing publicity tools such as advertisements, brochures, posters, journal articles, websites, brand management, product promotion, social media marketing, in-person promotions, visuals, and demonstrations while taking into account the needs of people, the environment, and the benefits is all part of green promotion (Shil, 2012). This refers to giving precise product details in a way that protects buyers' and customers' interests (Hashem & Al-Rifai, 2011). The primary goal of green marketing is to draw in customers by raising awareness of the benefits of the products. Encouraging clients to learn about firms' environmental commitments and initiatives is known as green marketing. This component of the green marketing mix is made up of a number of strategies, such as on-site promotions, direct marketing, sales promotions, public relations, and paid advertising. Providing clients who are involved in a business's activities with proper environmental information is known as "green promotion."

1.3.2. Factors Affecting Green Marketing

1. Pro-Environmental customer behaviour: According to Neaman et al., (2018) and Otto et al., (2022), pro-environmental behaviour is viewed as a subtype of prosocial activity that is motivated by a desire to protect the environment. In particular, it consists of actions meant to lessen or undo the harm a person has caused to the environment (Kollmuss & Agyeman, 2002; Siegel et al., 2018). Pro-environmental behaviour is impacted by a number of interrelated internal and environmental factors (Siegel et al., 2018; Kollmuss& Agyeman, 2002), which together help to shape our inner drives. These consequently serve as motivators for

the actualization of conduct. Thus, the significance of individual variances is emphasized, although it is unclear what causes the predisposition for pro-environmental behaviour.

2. **Environmental knowledge**: According to Frick et al., (2004); Kaiser and Fuhrer (2003), environmental knowledge is described as knowledge that blends understanding of the functioning and issues with ecosystems, civic behaviour options, and the pursuit of a higher environmental benefit. The notion of environmental knowledge, according to Mostafa, (2007), encompasses knowledge about the environment, the causes of its impacts, the insights as a whole, and a shared commitment to sustainability. The idea should also cover everything from being aware of environmental issues to finding solutions for them (Kollmuss& Agyeman, 2002; Bamberg & Möser, 2007; Zsóka et al., 2013).

3. **Demographic factors**: It is clear from a number of earlier research that demographic factors significantly influence customers' pro-environmental/green shopping behaviour. Environmentally concerned customers are often caucasian, female, professional, and younger (Harris et al., 2001). According to Kollmuss and Agyeman (2002), demographic factors are among the most significant factors influencing pro-environmental behaviour. Moreover, men and women have significantly different levels of awareness of green products (Shukla et al., 2019).

4. **Environmental concern and awareness:** Environmental concern is described as the degree to which a person understands and cares about environmental problems, supports attempts to address them, and expresses worry for them (Lin & Niu, 2018). Customers that care about the environment are very motivated and keen to buy ecologically friendly goods (Verma et al., 2019). Based on previous studies (Mainieri et al., 1997; Bamberg, 2003; Mohd, 2016), green consumption intentions and attitudes are positively impacted by environmental concerns. Ahmed et al., (2021) claims that environmental concerns have a positive impact on young customers' inclinations to purchase organic food. The findings showed that environmental concern enhances the association between attitudes and the propensity of young customers to purchase organic food. Furthermore Beckford et al., (2010)

and Cornelissen et al., (2008) found that environmental views had a major impact on customer buying behaviour related to environmental concerns and going green.

5. **Greenwashing**: Making false or deceptive claims about a product's or practice's environmental advantages is known as "greenwashing". Nguyen et al., (2019) and Sun & Shi (2022) found that greenwashing has been negatively associated with the green purchase intention of the customer. According to Zhang et al., (2018), customer perceptions of greenwashing have a detrimental direct impact on customers' intention to purchase green products as well as a detrimental indirect impact through green word-of-mouth. Furthermore, green concern strengthens the unfavourable association between intentions to purchase environmentally friendly products and views of greenwashing. Tarabieh, (2021) asserts that greenwashing has a favourable impact on perceived risk and green confusion.

1.3.3. Challenges in green marketing that pave way for greenwashing:

Greenwash occurs frankly in the shadowy world of green marketing. Businesses are eager to satisfy the customer demand for green products, which compels them to violate business ethics. As a result, they start to deceive the customers into making earnings in the name of green products. Though the term "Greenwash" wasn't first used until 1986, its effects might be detected as early as the 1960s. A periodic presentation of greenwash are as follows;

1960s: Westinghouse's nuclear power unit is credited as being the first to apply greenwashing. The environmental movement was inspired by anti-nuclear activism. The loss of the ecosystem was something that people started to become aware of during that time. Companies began to support the green aspects of nature as a result of their products. Green advertisements were used in an effort to draw in the public. In 1969, more than $300 million was reportedly spent on advertising to promote eco-friendly products. It's surprising that this expense was eight times higher than the amount spent on anti-pollution research (Bruce Watson, 2016)**.**

1970s: The first Earth Day was observed at this time, in the 1970s. The corporations were urged to market themselves as being environmentally friendly. During this period, greenwashing was still going on (Torelli et al., 2020).

1980s: After the Exxon Valdez accident and the Bhopal gas tragedy, the environmental movement started to gain momentum. Following this traumatic experience, the phrase "greenwash" also spread among marketers who cheated the customer in the presence of environmentalists. Large corporations started investing on the creation of greenwash commercials. To increase their profits, they began to harm the environment heavily (Gonsalves, 2010).

1990s: At the same time as greenwash reached its peak, the entire world celebrated the twentieth anniversary of Earth Day. According to a 1991 article in the Journal of Public Policy and Marketing, customers were deceived by at least one of the 58% of commercials that claimed to be green. People had begun to express concern about environmental issues during this stage. They start making bold demands for the green products. In order to profit from these conditions, all businesses started to pose as being environmentally friendly. Greenwash, according to Dahl, (2010), is defined as "Ads and labels that promise more environmental value than they deliver. Companies use attractive and persuasive commercials to portray themselves as environmentally conscious, but in reality, they do not take any action to protect the environment. The federal trade commission established "green guidelines" in 1998, which provided a comprehensive glossary of terms used in environmental marketing. Finally, in 1999, the term "greenwashing" was first included in the Oxford english dictionary.

2000s: During this time, businesses began to compete fiercely with one another to market themselves as environmentally friendly. According to the research from USA, only 2% of products were genuinely green, as compared to 4.5%. Between 2007 and 2009, greenwashing surged by up to 79%. Additionally, 95% of products were determined to be guilty of greenwashing, and practically all products had at least one instance of this sin (Terrachoice, 2010). In the end, Greenwashing has taken a murky shape.

1.4. Green Initiative by different organizations to regulate green products:

The concern over safeguarding the environment has brought the public, business, and government to a level playing field where each must fulfil a certain function. The

government and legislators are using their clout to lessen the risks to the environment and public health brought on by industrialization and to encourage the creation of cleaner technologies. The natural environment is, however, under a great deal of stress as a result of unplanned urbanization, fast industrialization, and shifting consumption habits in the quest for higher living standards. It is abundantly obvious that environmental regulation by pollution control organizations alone is insufficient to return the natural world to its pure form. The development of proactive and proactive roles should be coordinated with an overall environmental protection strategy.

1.4.1. Eco – Mark scheme

The moment has come for customers to take action and demand that businesses utilise clean, green technologies, dispose of unwanted goods safely, and take precautionary and mitigating measures. In an effort to raise customer awareness, the Indian government introduced the "Eco-mark" eco-labelling system in 1991 to make it simple for customers to find environmentally friendly items. A product can be said to be environmentally friendly if it is created, used, or rid of in a way that considerably lessens the damage it would otherwise do to the environment. Customer items that satisfy both the quality standards of Indian Standards and the prescribed ecological standards are given the "Eco-mark" designation. All products with Eco-marks are treated as environmentally friendly products.

The criteria for eco-labelling were established by the Eco-mark Technical Committee of the Central Pollution Control Board (CPCB, Ministry of Environment and Forests, GOI), with the Bureau of Indian Standards (BIS) acting as the Eco-mark's implementing body. Eco-mark was to be used in tandem with the ISI mark. When a product bears the Eco-mark, it indicates that it was created, utilized, or disposed of in a way that significantly reduced any potential environmental harm.

There are currently 16 product categories listed for "Eco-mark" consideration, including soaps and detergents, paper; food items, lubricating oils, packaging materials, architectural paints and power coatings, batteries, electrical/electronic

goods, food additives, wood substitutes, cosmetics, aerosol propellants, plastic products, textiles, fire-extinguisher, and leather.

The logo chosen for the Eco-mark scheme in India is an earthen pot. The common earthen pot employs a renewable material, like earth, takes less energy during production, doesn't produce toxic waste, and is environmentally friendly. Its sturdy and elegant shape symbolises the durability and delicacy that also define the eco-system. It communicates its environmental message through symbolism. Its image has the power to influence individuals and can work to raise awareness of the importance of protecting the natural world. The Eco-mark Scheme badge denotes that the product carrying it does the least amount of environmental harm (Das, 2002).

Figure 1.5:The Eco- Mark

The particular objectives of the plan are as follows:

1. To persuade merchants and manufacturers to diminish the harmful effects of their products on the environment.
2. To recognize the earnest efforts made by companies to lessen the negative environmental effects of their products.
3. To encourage customers to live more environmentally conscious lives by educating them on how to take environmental issues into account while making purchases.
4. To induce people to purchase products that have less detrimental environmental effects and ultimately to encourage sustainable resource management and to improve environmental quality.

1.5. Customer perception

Perception is an important component of many theoretical frameworks utilised in nursing research. It is a three-level approach that converts raw information

into meaningful images. Customer perception, according to Walters et al., (1989), is "the complete method by which a person gets responsive to the environment and interprets it so that it will work into his or her frame of reference". Perception occurs when the sensory system receives inputs through the mind, codes and categorizes them, and assigns meaning to them based on the individual frame of reference. A person's frame of reference is made up of his previously held realities, faith, likes, dislikes, biases, feelings and other psychological responses to an uncertain starting point (Walt, 1991).

Marketing may be difficult and time-consuming at times. It is due to the intricacy of the human brain and how it works. Customers' thoughts are changeable, yet they tend to converge when they exhibit specific emotions and behaviours. Many of the complex ideas and behavioural patterns displayed by customers may be merged into a notion known as customer perception. The placement of a product or service by the customer is heavily influenced by the mental image the customer has formed of it. The success of a product or service is determined more by what customers perceive of it than by its actual attributes or performance.

1.5.1. Factors influencing customer's perception:

i. **Company Image**: The public image or reputation of a corporation influences customer perception. Customers' perceived value will rise if a firm has a strong reputation in the market. Consumers' emotional and psychological connections to a company are essentially represented by its company image, which is crucial in influencing their purchase decisions. A strong reputation may boost word-of-mouth advertising, customer loyalty, and eventually sales.

ii. **Distinctive product characteristics and design:** The distinctive features and design of the product provide a competitive advantage in the market. For example, Harley Davidson motorcycles and Rolex watches have distinct features and designs that set them above the competition. Product design is inextricably linked to brand building. However, goods are essential to a brand's identity, especially for luxury companies, because they capture every aspect of the consumer experience (Keller, 1993; Keller & Lehmann, 2006; Wiedmann, Hennigs, & Siebels, 2007).

iii. **Product packaging**: It is the method of developing the cover of a brand or product. Packaging is a type of marketing that performs purposes including attracting people, explaining the goods, and selling it.

iv. **Accessibility:** The foundation of a satisfying shopping experience, steady product availability is what guarantees a steady revenue stream and loyal customers. The company may lose to direct rivals if it does not offer the correct items at the proper time and pricing.

v. **Brand Awareness**: Brand awareness refers to a potential buyer's capacity to recognize or recall that a brand belongs to a particular category of goods. Buyers frequently choose a well-known brand. A brand's popularity makes it more trustworthy in the opinion of purchasers. As a result, a well-known brand will be chosen over an unfamiliar one.

vi. **Price:** The price of a product can influence buyer impression. When the price charged is reduced, price-sensitive clients may have a good opinion of the product. Non-price-sensitive clients may have a good view of the product even at a greater price if they are happy with the brand's other features.

vii. **Recommendations:** The advice of others strongly influences customers' purchase decisions. However, the amount of such an effect depends on the context or person. Later adopters are typically more driven than early adopters.

1.6. Literature Review

The literature review has been divided into five parts according to the concepts taken into consideration viz. green marketing, environmental concern, customer perception, greenwashing, green purchase intention.

i. Green Marketing

Kim & Cha (2021) attempted to describe the effects of customer innovativeness on the linkage between green advertising features and green purchase intention. Data was analysed using 200 valid surveys and structural equation

modelling was used after gathering data from South Korean customers. Three characteristics of green advertising such as attractiveness, dependability, and informational value were found to be positively correlated with green purchase intention by the analysis, which also highlighted the moderating influence of customer innovation in those connections.

Kaur et al., (2022) examined the relationship between green marketing mix methods and customer green purchasing intentions in a developing economy. The emphasis was on millennials' intentions to purchase environmentally friendly personal care items and how green marketing methods may affect those intentions. Customers' environmental attitudes and the function of customer demographics as control factors are both evaluated for their moderating effects. Structural equation modelling was employed in the study to validate 405 answered from millennial users of eco-friendly personal care items. The control variables were evaluated using multi-group analysis. Results showed that green purchase intentions are highly impacted by green items, green places, and green promotional techniques. Some intriguing findings were produced by the moderating effect of environmental attitude.

Tan et al., (2022) proposed a model where linkages were evaluated using structural equation modelling (SPSS-AMOS), which was suggested after data from 300 Pakistani respondents were obtained. The findings show a strong positive correlation between actual green marketing tactics (green knowledge, attitude, environmental awareness, and intention to purchase green products); additionally, positive customer choice intentions are fostered by green goods that have superior ecological qualities. Furthermore, the environment, green knowledge, and green marketing techniques all directly and significantly affect the perception and credibility of the green movement. According to this study, using green strategies as a brand marketing tactic can increase customers' propensity to make purchases. The study also revealed that brand equity may be built and preserved with the use of green marketing.

Majeed et al., (2022) conducted research where they focused on likelihood of purchasing eco-friendly goods was investigated in connection to variables such eco-labelling, eco-friendly packaging and branding, and eco-friendly goods, premium, and price. Based on the responses of 450 respondents to a survey, this study assesses a model that uses green marketing strategies. The article also examined how customer environmental attitudes and brand image affect the relationship between green marketing and intentions to make green purchases. The structural equation modelling (SEM) method is used to validate the framework of this study. According to the study's findings, green marketing strategies have a considerable and favourable impact on customers' intentions to make environmentally responsible purchases. It was found that green brand perception and customer environmental sentiments significantly affected the path coefficient between green marketing strategies and green green purchase intentions. This study's important findings suggest that people are becoming more receptive to green marketing.

Correia et al., (2023) examined whether customers' attention to businesses' green marketing messages affects their propensity to make green purchases. It also examined the significance of customer traits, such as gender, education, and environmental beliefs, in determining how much attention customers pay to businesses' green marketing communications. 690 valid responses from an online poll of adults in Portugal who are above the age of 18. Descriptive analyses, parametric and non-parametric testing, linear correlation, and regression analysis were all employed as data analysis tools. The outcomes allow us to draw the conclusion that customers pay attention to green marketing messages from businesses. Customer attentiveness to businesses' green marketing communications and green purchase behaviours were shown to be strongly correlated.

ii. Customer Perception

Madhankumar (2023) investigated the effects of various green marketing methods on customer perceptions of green products and their decision to buy based on the Theory of Reasoned Action. An empirical study was carried out among customers who had at least made one green product purchase in their lives. 204

customers were used as the sample size, and the statistical data suggested a substantial correlation between marketing tactics, product attributes, customer green values, and customer perception. The study has important ramifications for ecological stakeholders. According to the survey, customers' attitudes towards green products were generally favourable and they really wanted to preserve the current and future state of affairs. According to the survey, customers have a generally good attitude towards green products and a sincere desire to preserve the current and future level of ecological sustainability. Be it food or everyday items, customer adoption of green products has grown quickly.

Arici et al., (2023) identified ecologically friendly themes and concepts. This study looked at customers' green TripAdvisor evaluations. The variations among the 10 nations in terms of the quantity of green evaluations and the green satisfaction scores of customers were also examined. The study used a mixed research approach to examine 121,780 TripAdvisor reviews for 87 eco-friendly hotels in the top 10 travel destinations using Leximancer analysis and multivariate analysis of a large dataset. According to the Leximancer research, the room, everyday, hotel, staff, front, food, coffee, great, experience, and vacation themes are the ones that are most frequently cited in customer green evaluations. Additionally, the data indicated that Italy, the United States, and Turkey had the greatest satisfaction ratings, while Germany and France had the lowest scores.

iii. Greenwashing

Setiawan &Yosephani (2022) examined the relationship between customer intentions to buy green products and perceptions of greenwashing. The strategic relationship between these two crucial dimensions in green marketing is an area of important study need. Individuals, namely customers who are aware of drinking water products in single-use gallon containers, serve as the study's analytical unit. Purposive sampling was used to choose the sample, which included 500 respondents. The instrument's validity and dependability are examined using confirmatory factor analysis. The study hypothesis was tested using the structural equation modelling (SEM) methodology. The findings indicate that the notion of "greenwashing" has a

negative and significant impact on customers' propensity to make green purchases. Customers' intentions to make green purchases are closely related to how greenwashing is perceived.

Ghassani et al., (2022) conducted research to ascertain the relationship between green purchasing intention and greenwashing, green word of mouth, and attitude towards green products. To comprehend attitude better, green trust is investigated. Theory Reasoned Action is the technique employed. They have employed the purposive sample method on 227 people. PLS-SEM was used to assess the results. This study showed that while green word of mouth and green trust had little impact on green purchasing intention, greenwashing and attitude towards green products have more impact. The research demonstrates that while greenwashing has no effect on green trust, green word of mouth does, while green trust and favourable word of mouth have a beneficial impact on attitude towards green products, greenwashing has no effect on that attitude.

Lopes et al., (2023) intends to investigate how corporate greenwashing practises affect customers' intentions for circular consumption when such intentions are influenced by customer information seeking and environmental concerns. In order to achieve this, a sample of 826 reliable customer answers from Portugal was gathered. The partial least squares approach was employed and a quantitative methodology was used. The study discovered that customers' environmental worries and willingness to look for sustainable information are favourably impacted by greenwashing. In turn, these elements favourably affect their intentions about circular consumption. The findings cast doubt on the notion that greenwashing is always bad and point to its contradictory role in advancing sustainability.

Fella & Bausa (2023) investigated customer views of these goods and explored whether customers can reliably detect greenwashing. Customers may classify a new product as honestly green, greenwashed, or regular depending on existing knowledge of various green signals, according to categorization theory. In a within-subject trial (N = 174) carried out in Germany, it was discovered that buyers frequently fell for greenwashing when just asked about their purchasing intentions.

The findings add to the body of knowledge on how customers interpret verbal and visual product cues that have been "green(washed)". Second, it offered preliminary data refuting the underlying premise in the literature on greenwashing and green advertising that customers can tell the difference between items that are truly green and those that are not.

iv. Environmental Concern

Lin & Niu (2018) they focused on the customers of Taiwan and 649 valid questionnaires were located. In order to extract the trait components, exploratory factor analysis was utilised. Confirmatory factor analysis and structural equation modelling, on the other hand, were used to the scale and structural model, respectively, for verification. The outcome demonstrates how customers' environmental awareness, knowledge, and cultural standards have a beneficial impact on their environmental attitude as well as their perception of wellbeing. Green products are being preferred by customers in both intention and behaviour.

Shabbir (2020) proposed that eco-labelling, eco-branding, eco-packaging, pricing, and other factors influence customer behaviour in his study on the relationship between green marketing practises and environmental behaviour. The study found that customers in the United Arab Emirates are positively impacted by environmental ideas and concerns. Additionally, the study offered many recommendations for enhancing green marketing and fostering a positive outlook on society.

Kumar et al., (2022) conducted research where the theory of planned behaviour (TPB) model was applied together with environmental concern, individual moral standards, and perceived customer effectiveness. The proposed model was assessed using variance-based partial least square-structural equation modelling (PLS-SEM). The results showed that perceived behavioural control, followed by individual moral standards, attitude, and perceived customer efficacy, had the strongest significant positive influence on green purchase intention. Through three key TPB factors and individual moral standards, environmental concern was revealed to indirectly influence purchase intent. To investigate the moderating impact of

perceived customer efficacy on an attitude-intention connection, multi-group analysis (MGA) was used.

Simanjuntak et al., (2023) examined how environmental awareness, word-of-mouth (WOM), and green marketing affect customer intentions to buy environmentally friendly goods. Structural equation modelling was used to analyse a total of 159 valid surveys. The research findings showed that environmental knowledge strongly influences attitudes towards environmental protection. The intention to buy green items is also strongly and favourably impacted by green marketing and environmental concerns. WOM and green marketing, on the other hand, have little impact on people's views towards the environment. The inclination to buy green items is similarly unaffected by environmental awareness and WOM.

Chen et al., (2023) conducted a survey using a self-administered questionnaire that was distributed by enumerators in two major Pakistani cities (Lahore and Karachi), of which 349 were useful for the data analysis procedure. Using structural equation modelling with partial least squares in Smart-PLS 4.0, the hypothesized associations were verified. Empirical results indicated that green marketing (GM) and green customer value (GCV) had a favourable effect on brand awareness (BA), environmental concern (EC), and eco–conscious consumer behaviour (ECB). The results also showed that BA and EC had a limited mediating impact on the connection between green marketing, green customer value, and eco – conscious consumer behaviour. The moderating effect of felt obligation (FO) on the link between BA and ECB was also noted in this study. The results demonstrate that the eco – conscious consumer behaviour is necessary for a sustainable environment.

Chao et al., (2023) empirically evaluate a model that can forecast the variables that influence students' recycling behaviour. Self-report questionnaires were used in a cross-sectional research of Taiwanese college students. Structural equation modelling was used to analyze 523 of the 800 distributed surveys. The models and assumptions were put to the test using partial least squares (PLS). The findings demonstrated that interpersonal kindness and motivation both had

substantial beneficial impacts on recycling behaviour as well as motivation and place attachment have significant positive effects on interpersonal altruism.

v. Green purchase intention

Mensah (2021) ascertained the ways in which the knowledge that university students had about green products influenced their intentions to acquire eco-friendly products. The main goals were to ascertain the impact of price, availability, value, awareness, and quality on university students' intention to purchase environmentally friendly products as well as how these factors predict such intention. A structural equation modelling approach was used to examine data collected from an online survey that was completed by 478 students. The results show that university students' intentions to purchase green products are most influenced by their perception of the quality of green products. Conversely, green perceived availability had the least amount of an impact.

Nekmahmud et al., (2022) undertook a study to examine customers' intentions to purchase eco-friendly goods as well as the ways in which marketing and social media activities affect customers' sustainable buying habits. They propose a novel approach for determining customers' intents to make green purchases using social media by including social media marketing, green thinking, and social media usage into the Theory of Planned Behaviour. The urge to purchase environmentally friendly products on social media is positively correlated with attitude, subjective norms, perceived behaviour control, green thinking, and social media marketing.

Moslehpour et al., (2023) explored the relationship between customers' intentions to purchase environmentally friendly goods in Taiwan's manufacturing sector and environmental concern, understanding of green products, and eco-innovation. The study also examines the role that customer attention plays as a mediator between eco-innovation, green products, and environmental concerns as well as green purchase intent. According to the findings, environmental awareness, green product preference, green purchasing intention, and eco-innovation are all positively correlated. The research also showed that customer attention mediates

environmental concern, environmental knowledge, green product, eco-innovation, and green purchasing intention in a substantial and beneficial way.

Lavuri et al., (2023) examined the elements that encourage green purchasing intention in the emerging market using the theory of planned behaviour, with the moderating effect of environmental information, including environmental concern, perceived control behaviour, and subjective norms. The results showed that concern about the environment had a significant impact on subjective norms, green attitude, and perceived behavioural control. Subjective norms had an advantageous effect on the green attitude but did not directly affect perceived behavioural control or green purchase intention. Green attitude and green buying intention were very moderately correlated with environmental knowledge.

1.7. Research Gap:

On the basis of the literature reviewed, there are number of studies done in many developed countries and in India regarding green marketing practices. However, the study has found that there has been no literature where the impact of environmental concern act as a mediator between green marketing dimension and purchase intention has been studied. Though environmental concern plays an important role in the shift to sustainability, there is a lack of study on the impact of environmental concern as a mediator between greenwashing and purchase intention. Previous studies focuses more on challenges and opportunities towards green marketing and exploring how advantageous is green marketing for the organization. As green marketing is an evolving area, it is important and evidently necessary to understand customer perception towards green marketing mix. Studying the perception of customers towards green marketing in Assam is necessary because of their prevailing differences in economy, culture and environment. Thus, the study has been conducted to fill the gap of the above-reviewed literature.

1.8. Significance of the Study

A range of different factors can be involved in green marketing, such as creating a sustainable and environment-friendly product, using eco-friendly packaging, incorporating sustainable business models, or concentrating marketing

strategies that convey the green value of a product. Creating eco-friendly products and services has become a vital responsibility at the part of the marketers. It is not only about the industrial goods but also includes the service sector, both tend towards the ecosystem degradation of the ozone layer and its depletion. However, the most important part of green marketing is that they tend to get a competitive advantage for the environmentally friendly products in the market against the non-environmentally friendly products. It is equally important to know about the customer perception towards it to receive the advantage both in the form of marketing as well as advantage to the environment.

The study will be beneficial for the marketers, government and customers as well, marketers because it will help them to analyse the customer perception towards green marketing and accordingly, they can move forward to fulfil the needs of the customer. The government on the other hand will be aware about the customer perception towards green marketing and greenwashing and accordingly may take certain steps to provide an ecological friendly environment through various terms and conditions. For the customer's, their perception will be taken forward, and their needs would be considered and will lead towards better sustainable environment, which will also improve the society.

1.9. Scope of the Study

The study covers customers from the state of Assam in India. There are 5 divisions in Assam and from every division, one district is selected. This study tries to evaluate the perception according to demographic factors age, gender, education, etc i.e., to find if there is any relation between the demographic factor and the perception level. The research also explored some other areas related to green marketing like the greenwashing, corporate social responsibility, environmental marketing, sustainable marketing etc. However, the study evaluates customer perception or awareness about greenwashing and find out the relation between greenwashing and the organisation's credibility.

1.10. Statement of the problem

The customer's dynamic shift towards sustainability and environmental preservation has resulted in significant adjustments to marketing tactics. The focus of marketers is on creating environmentally friendly products and promoting them using sustainable green marketing techniques. The development of green marketing strategies and the move towards environmental protection have sparked improvements in marketing techniques worldwide, including in India. There is a need to explore the perception of customers regarding these green marketing practices that are employed by marketers as it would help to understand customer behaviour while making a purchase decision. The advent of sustainable green marketing practices and their evolution over time, has brought into force the effect of greenwashing, which refers to the process of business firms making false or misleading information to customers showing that they are concerned about environment, as customers have relatively shifted their preference towards green products. The effect of green washing is becoming more and more evident in today's business world and there is a need to study the awareness of customer towards the effect of greenwashing as it would help the customer to differentiate between genuine green marketing practices and green marketing practices that are just greenwashing.

The state of Assam is plagued with several environmental issues which are air pollution, soil pollution, and water pollution due to the relative exploitation of the environment by industries. There is a need to reduce pollution and its harmful effects on environment. The state of Assam presents a unique opportunity for the growth of green entrepreneurs which would not only help to protect the environment but will also lead to sustainable development of the region.

1.11. Research Objectives:

The study has been carried out to achieve the following objectives:

1. To study the demographic profile of the respondents and their relationship with perception towards green marketing mix.

2. To assess the different components of green marketing mix and how they affect customers' intentions to purchase green products.

3. To examine the relationship between customers' perception of green marketing and their environmental concerns.

4. To determine the impact of greenwashing on customer green purchase intention in the presence of environmental concern as a mediator.

5. To provide recommendations on how stakeholders could benefit from green marketing initiatives towards sustainability and also recommend a policy framework for checking the use of greenwash.

1.12. Hypotheses

A research hypothesis is a scenario that is presented as a likely result or an explanation for a certain circumstance or aspect of a phenomenon. To the study's research questions, they offer potential and likely solutions. A hypothesis is a "tentative statement regarding an association between two or more variables as specified by the theoretical framework or the analytical model," according to the definition given. They are declarative in character and are testable empirically. Research topics are further spawned by the theoretical framework or study objectives, which are determined by challenges in marketing research. After carefully considering the study questions and objectives, hypothesis are developed analytically. Null hypothesis and alternative hypothesis are the two different sorts of hypothesis. The term "null hypothesis" refers to a hypothesis that holds that the variables do not differ or have any special relationship. To put it another way, the null hypothesis said that if any difference between the variables arises as a result of sampling error, it will not be statistically significant. An alternate hypothesis is one that claims that a difference predicted to occur between two groups really does so. To verify the relationship among the variables picked for the study, the researcher has

established a few hypotheses. The study has been carried out to test the following hypotheses;

H_1: There is a significant relationship between demographic variables and perception towards green marketing mix.

H_1a: There is a significant relationship between gender and the perception towards green product, green price, green place and green promotion

H_1b: There is a significant relationship between age and perception towards green product, green price, green place and green promotion.

H_1c: There is a significant relationship between occupation and perception towards green product, green price, green place and green promotion.

H_1d: There is a significant relationship between education and perception towards green product, green price, green place and green promotion.

H_1e: There is a significant relationship between income and perception towards green product, green price, green place and green promotion.

H_2: There is a significant relationship between green marketing mix and customer green product purchase intention.

H_2a: There is a significant relationship between green product and customer green product purchase intention.

H_2b: There is a significant relationship between green price and customer green product purchase intention.

H_2c: There is a significant relationship between green place and customer green product purchase intention.

H_2d: There is a significant relationship between green promotion and customer green product purchase intention.

H_3: There is a significant relationship between customers' perception of green marketing mix and their environmental concern.

H_3a: There is a significant relationship between customers' perception of green product and their environmental concern.

H_3b: There is a significant relationship between customers' perception of green price and their environmental concern.

H_3c: There is a significant relationship between customers' perception of green place and their environmental concern.

H_3d: There is a significant relationship between customers' perception of green promotion and their environmental concern

H_4: Greenwashing has a significant impact on customer green purchase intention in the presence of environmental concern as a mediator.

H_4a: Greenwashing has a significant negative impact on green purchase intention.

H_4b: Greenwashing has a significant positive impact on environmental concern.

H_4c: Environmental concern has a significant negative impact on green purchase intention.

H_4d: Environmental concern has a significant mediating impact on the relationship between green-washing and green purchasing intention.

1.13.Research Methodology

This part of the thesis covers the sampling framework, sampling design, research instrument (questionnaire), statistical tools and techniques used to test the research hypotheses.

1.13.1. Type of Study

A descriptive and explanatory approaches has been used to uncover and explain the perception towards green marketing practices. The descriptive approach provides a snapshot of the current situation and describes various characteristics of the variables and provide valuable insights. Whereas, the explanatory approach attempts to explain why a phenomenon occurs and tries to identify the factors behind it. In this quantitative study, the sample was taken from the target population, and statistical analyses were performed on them. Required data were gathered using field surveys due to their distinguishing features of being incredibly cost-effective, easy targeting and potential to gather large amounts of data. A well-structured questionnaire was supplied to the target respondents. To cater to linguistic biases, the questionnaire was circulated both in English and the local Assamese language. Such surveys enable to collect data that are true representative of the population and allow for quantitative analysis using inferential and descriptive statistics.

1.13.2. Population of the Study

The target population under the purview of this study is people who have some knowledge on green marketing from Assam, due to the non-availability of any comprehensive list of the people having knowledge about green marketing. It has been tried to make sure that a sample, a true representative of the target population has been used to understand the perception of customers regarding green marketing, greenwashing, and their environmental concerns.

1.13.3. Sampling Framework

It is a list of the intended target population out of which a sample is drawn. In this study, the frame is obtained by listing the household in the selected city area to identify the people having some knowledge about green marketing and who agrees to be a part of the survey.

1.13.4. Sampling Method/ Techniques

In this study, a multi-stage sampling approach has been employed which initiates with purposive sampling followed by random sampling approach. For administrative purposes, the province of Assam has been partitioned into five divisions based on geographic area and population. This division has been adopted as five level stratification for the study. The administrative divisions (stratification for this research) are North Assam, Lower Assam, Central Assam, Upper Assam, and Barak Valley. Using administrative divisions as strata for the study is an assurance of proportionate representation of the population within the sample, which increases the likelihood that the sample will be true representative of the entire population. Within each of the strata, there were many districts representing the division. Based on purposive sampling method, one district with the highest population from each of the divisions has been selected for the study constituting Sonitpur from North Assam, Barpeta from Lower Assam, Nagaon from Central Assam, Dibrugarh from Upper Assam, and Cachar from Barak Valley.

After forming strata and determining the districts from each of the divisions of Assam, from each district, locations within the district the city area where there are more intensive environmental activities were chosen purposively namely Tezpur, Barpeta, Nagaon, Dibrugarh and Silchar. The sample size is determined, by using the sample proportion method given by Malhotra and Dash (2011). So, the desired sample for the study was 385. While determining the number of records from each location, the population of each location was accounted and records were collected in the proportion to entire population (Table 1.1).

$$n = \frac{\pi(1-\pi)Z^2}{D^2}$$

Where,

n- Sample size

π = Sample Proportion (0.5) producing maximum possible population variance or π (1- π)

Z^2 - Z value at 95% confidence interval

D - Level of precision supposed to be ± 0.05

$$n = \frac{\pi(1-\pi)Z^2}{D^2}$$

$$n = \frac{(0.5)(1-0.5)(1.96)^2}{(0.05)^2}$$

= 384.16 or 385

Table 1.1: Population and Sample of the Study

Divisions	Districts	Location (City)	Percentage of number of populations	Population included in the study (Designated Quota)
North Assam	Sonitpur	Tezpur	13.4	52
Lower Assam	Barpeta	Barpeta	7.6	30
Central Assam	Nagaon	Nagaon	20.9	80
Upper Assam	Dibrugarh	Dibrugarh	27.4	105
Barak Valley	Cachar	Silchar	30.7	118
Total			100	385

Source: *Author's Calculation*

Once, strata, district and locations within the district were identified and quota was assigned to each location, intended respondents were targeted randomly whoever aged above 18 years. To draw the sample randomly random table was used i.e., using a list of random number. Each household from the strata were assigned random numbers from 1 to N. Since the sample size is in two digits in each stratum, two-digit numbers were selected from the random number table. They were supplied questionnaire in desired language using the structured questionnaire. In total 385 respondents were targeted according to the desired sample size. After data quality check and cleaning process, only 353 were found suitable for further analysis and reporting.

1.13.5. Primary data collection

The primary objective of the research was to gather primary data. Data from the target respondents have been collected using a survey method. Using a self-administrated survey, 385 respondents from the aforementioned districts provided were used for data collection. The primary way for gathering data was through surveys. A structured questionnaire was created to gather first-hand information.

Demographic profile of respondent: In the Questionnaire the first part consists of demographic data of the respondent i.e., name, age, gender, district, educational qualification, occupation and monthly income. These questions will help to know the demographics.

Green marketing mix dimension perception and green product purchase intention: This part of the questionnaire consist of 4 sub parts representing each dimension of green marketing like green product, green price, green place and green promotion, and there is another part for customer green purchase intention. These comments were rated on a five-point Likert scale: strongly agree (1), agree (2), neutral (3), disagree (4), strongly disagree (5). These statements are being tested in order to evaluate the impact of various green marketing dimension on customer green purchase intention. The statements were derived from Chen & Chang (2012), Nguyen et al. (2019), Tariq (2014), Rezai et al. (2012) and Chiu et al. (2012).

Greenwashing perception and green purchase intention: In this section customer perception regarding greenwashing is being evaluated and how customer's green purchase intention gets affected due to greenwashing practices followed by the company's. This section was used to evaluate the impact of greenwashing on customer green purchase intention in presence of environmental concern as a mediator. These comments were rated on a five-point Likert scale: strongly agree (1), agree (2), neutral (3), disagree (4), strongly disagree (5). The statements were derived from Manvi Khandelwal & Ashok Sharma (2019), Braga Junior (2018)**,** Chen, Y.S.; Chang, C.H (2012), Chen (2016), Alsmadi (2007).

Environmental concern: This part of the questionnaire consists of statements related to the perception of customers towards environmental concern and issues. And this has been used as a mediator between greenwashing and green purchase intention to evaluate if greenwashing effects directly or indirectly towards customer green purchase intention. These comments were rated on a five-point Likert scale: strongly agree (1), agree (2), neutral (3), disagree (4), strongly disagree (5). The statements were derived from Alsmadi (2007), Dunlap et.al (2000) his NEP (New Environmental Paradigm) has been used.

Secondary data collection:

To fully comprehend theories of customer behaviour, secondary sources were also used. To learn about the most recent advancements in the field of customer behaviour, the researcher visited numerous libraries and used databases online. To gather data on customer behaviour trends, a wide range of national and international journals, newsletters, magazines, and research papers were consulted.

1.14. Tools for data collection and analysis:

Questionnaire: A survey method was utilised to gather primary data, and the instrument of data collection was a self-administered questionnaire. The questionnaire asks a variety of questions to gauge how concerned customers are about the environment, green marketing, and greenwashing. It is separated into four main categories for convenience (see to Appendix-I for questionnaire). The

statements ranged from strongly agree to strongly disagree, and respondents were asked to indicate their level of agreement.

Point biserial: A specific form of Pearson correlation called point biserial correlation looks at the connection between a dichotomous variable and a metric variable.

Spearman correlation: The Spearman correlation test, like the Pearson test, looks at if two variables are associated or not. Because Spearman's test employs ranks rather than assuming normality, it may be used to examine data at both the ordinal level and the continuous level.

Factor analysis: A method of data reduction is factor analysis. A huge number of variables are reduced or summarised by component analysis into a smaller number of factors, which are then made up of the original set of variables. Factor analysis is a technique for determining if several important variables are connected to fewer, unobservable components. This is accomplished by categorizing variables depending on how closely they correlate with one another. The components that are retrieved throughout the process are the latent variables, whereas the starting variables are the manifest variables/observed variables. Using principal component analysis, the components were extracted. Rotating the matrices can increase the interoperability of the factors. The orthogonal rotation varimax was used with the assumption that each factor existed independently of the others. The suitability of the data for factor analysis was assessed using Bartlett's Test of Sphericity and the KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy. In the KMO test of sampling adequacy, the magnitude of the observed correlation coefficients is compared to the magnitude of the partial correlation coefficients. Factor analysis was employed in this study to minimise the number of elements in the green marketing mix that influence customers' intentions to purchase green products and environmental concern of customers.

Multiple regression analysis: The inter-correlations between all the variables included in a multiple regression analysis are taken into consideration. The relationships between the predictor scores are also taken into consideration by this

technique (Cohen & Swerdlik, 2002). This approach is used to ascertain if the independent variable green marketing mix will account for variations in green product purchase intention and environmental concern.

Structural equation modelling: An approach to analyse multivariate data that examines the structural link between two or more variables is known as a structural equation model. Combining multiple regression analysis and confirmatory factor analysis makes up this method. Latent constructs and measurable variables are frequently analysed using this method. This technique was utilised to examine the effects of greenwashing and on green purchase intention with a mediator variable environmental concern.

Mediation analysis: This analysis is used to ascertain if there is a presence of mediating variable which may moderate the impact of the independent variable on the dependent variable. Mediation analysis involves a set of causal hypotheses. Initial variable may influence an outcome variable through a mediating variable. When the mediator variable partially or completely transmits the influence of the independent variable on the dependent variable, mediation has occurred. The study employed mediation analysis to investigate if customer environmental concerns act as a mediating factor in the link between greenwashing and green purchasing intention.

1.15. Limitation of the Study:

The present study has certain limitations as follows:

1) The study is confined to only five districts of Assam from each of the division having highest population. Hence the results cannot be generalised to other districts of Assam as there may be variation in their perception**.**

2) There are additional elements that can affect and influence how customers perceive green marketing; the current study solely looks at demographic and their environmental concern and greenwashing.

3) This study considers an overall view regarding the perception instead of any specific customers like FMCG customers or other criteria.

1.16. Chapter outline

Chapter 1: Introduction

The introduction of green marketing, evolution of green marketing, various green marketing mix, greenwashing and drivers of greenwashing, and customer perception are covered in this chapter, along with the definition of keywords, literature review, research gap, statement of the problem, significance and scope of the study, objective, hypothesis, research design, data analysis, study limitations, and chapter outline of the thesis.

Chapter 2: Socio-Demographic and Perception Towards Green Marketing

In this chapter the demographic profile of the respondents are discussed. Additionally, how the demographics of the respondents has association with green product, green price, green place and green promotion are evaluated and analysed.

Chapter 3: Green Marketing Mix and Green Product Purchase Intention

In this chapter the green marketing mix i.e., green product, green price, green place and green promotion are studied in basis of green product purchase intention. The relationship between perception of green marketing mix of the customers and their green product purchase intention were analysed.

Chapter 4: Green Marketing Mix and Environmental Concern

In this chapter the green marketing mix were discussed in relation to environmental concern of the customers. The relationship between perception green marketing mix of the customer and their perception towards environmental concern were analysed.

Chapter 5: Greenwashing Perception and Green Purchase Intention: Environmental Concern as Mediator.

In this chapter greenwashing was discussed in relation to purchase intention and environmental concern. SEM analysis was used to see the relationship between the greenwashing perception and their purchase intention with the mediator and mediation analysis was done to analyse the effect of mediator on the relationship between greenwashing perception and green purchase intention.

Chapter 6: Summary of Findings and Suggestions

The summary of findings is presented with an effort to support it with the logical inferences from the earlier chapters. On the basis of the results, recommendations were given for various groups, and this chapter also underlined the need for future study.

2.1. Chapter-wise summary:

Chapter1: Introduction:

a) Green marketing encompasses more than just advertising; it also includes things like the creation of eco-friendly products, the use of sustainable business practices, the use of eco-friendly packaging, and the development of marketing campaigns that highlight the products' environmental benefits.
b) A green product is one that is manufactured with non-toxic materials and ecologically friendly practices and has received certification from a reputable body. The most crucial component of the entire green marketing strategy and the cornerstone of the green marketing mix is the product.
c) Green promotion includes designing the instruments of publicity, such as ads, promotional material, posters, journal articles, web pages, brand management, product promotion, social media marketing and on-site promotions, visuals and demonstrations while keeping people, world and benefits in consideration.
d) Green promotion is the dissemination of accurate environmental information to customers who participate in a business' operations. Additionally, businesses safeguard natural resources in order to draw in their target market.
e) Distribution of greens is a very sensitive process. Customers must be assured of the product's "Ecological nature." When distributing green products, a high level of observance is necessary because the green environment is constantly controlled.
f) Green marketing should consider all these information into consideration when charging a higher price. The cost of organic product has to be reasonable for the consumer to promote purchase. Pricing of any green products has an effect in its demand. The argument that consumers are unwilling in paying more for a product labelled "green" is made in the book by Ottman (1997).

g) Consumers that care about the environment are very motivated and keen to buy ecologically friendly goods.
h) Consumer views of greenwashing not only have a negative direct influence on intentions to buy green products, but also have a negative indirect impact via green WOM.

Chapter 2: Socio-Demographic and Perception Towards Green Marketing

a) The number of female respondents were more than the male respondents where females respondents accounts for 50.4% of the respondents while male respondents accounts for 49.6%.
b) It was found that the age group between18-25 are the highest number of respondents with 53.5% and the second highest are 26-35 age group with 32.3% respondents, 36 – 45 has 12.7% respondents and 45-55 has the least respondents with 1.4% and there were no respondents from the age of above 55.
c) It was found that the majority of the respondents i.e 89 respondents are from Silchar which accounts for 25.2 % of the total respondents. The second highest are the respondents belonging to Dibrugarh which accounts for 23.2%. The respondents belonging to Nagaon are in the third category which accounts for 20.1% followed by respondents from Tezpur which accounts for 17.6 % and the least percentage 13.9% of the total respondents were from Barpeta.
d) Most of the respondents were post-graduate with 40.7% and the second majority of the respondents were graduates with 40.5%, undergraduate were 10.8% of respondents and respondents having Ph.D. degree are 7.9%.
e) Additionally, it was found that in the income (per month) majority of the respondents had an income of less than 20,000 with 32.6% and the second majority is 51,000 – 100,000 with 28.3%, followed by 21000 – 50000 with 26.3% of the respondents and lastly more than 100,000 is 12.7%.
f) It was found that most of the respondents were students with 63.5% of respondents and the second majority was service with 19% followed by businessmen with 17% and housewives 0.6%.
g) The study found that gender and their perception towards green products were very weak, correlation value (r_{pb}= .009, p = .864) was found between gender and

preference towards green products. The relationship of gender with green price (r_{pb}= -.047, p = .381) is negatively correlated which means female perception is higher than male perception of green price and found not significant. The relationship of gender with green place (r_{pb}= -.047, p = .381) is negatively correlated and found not significant. It was found that the relationship of gender with green promotion (r_{pb}= -.053, p = .316) is negatively correlated and found not significant.

h) It was found that there is a weak and negative correlation between age and their perception of green products (r_s = -.127, p = .170), the p-value is insignificant. Since the correlation is negative it can be concluded that the younger age respondents have a positive response. The study revealed that the relationship between age and green price is negatively correlated (r_s = -.072, p = .180) there is no significant relationship between age and green price as the p-value is not significant. The relationship between age and green place is negatively correlated (r_s = -.072, p = .180) there is no significant relationship between age and green place as the p value is not significant. The relationship between age and green promotion is negatively correlated (r_s = -.068, p = .200) there is no significant relationship between age and green promotion as the p-value is not significant.

i) The study revealed that there is a negative correlation between education and their perception of green products (r_s = -0.001, p = .981), the p-value is insignificant. The relationship between education and green price is positively correlated which means as the level of education increases the urge to pay more for green products also increases (r_s = 0.017, p = .746) but there is no significant relationship between education and green price as the p-value is not significant. The relationship between education and green place is positively correlated, inferring that as the level of education increases people are more concerned about availability of the green products (r_s = 0.017, p = .746) but there is no significant relationship between education and green price as the p-value is not significant. The relationship between education and perception of green promotion is negatively correlated (r_s = -0.026, p = .623), and the p-value is insignificant.

j) The study found that students are positively correlated with green products, green price, green place, and green promotion respectively, (r_{pb} = 0.082, r_{pb} = 0.054, r_{pb} = 0.054, r_{pb} =0.143) but the relationship between students and and green product, green

price, green place and green promotion is not significant (p = 0.123, p = 0.31, p = 0.311, p = 0.137).

k) In the study it was found that people in services are negatively correlated with green products, green price, green place and green promotion respectively. (r_{pb} = -0.085, r_{pb} = -0.069, r_{pb}= -0.069, r_{pb} =0-.116) Only 19% (67) of respondents are in service occupation. The relationship between service as occupation and green product, green price, green place and green promotion is not significant (p = 0.112, p = 0.195, p = 0.195 and p = 0.129).

l) According to the study there were only 2 respondents who were housewives (.6%) and there was a negative correlation value towards perception of green product, green promotion (r_{pb} = -0.039, r_{pb} = -0.051), whereas green price and green place show a weak but positive relationship (r_{pb} = 0.005, r_{pb} = 0.005).

m) There were 17% of respondents who were into business and their relationship with green product and green promotion are negatively correlated (r_{pb} = -0.009, r_{pb} = -0.052) and green price and green place are found to be weak but positive relationship (r_{pb} = 0.002, r_{pb} = 0.002).

n) The study revealed that there is a weak and negative correlation between income and their perception towards green products indicating that as income increases the need for green product decreases (r_s = -0.09, p = 0.09), the p-value is not significant. The relationship between income and green price is positively correlated which indicates as the income increases the urge to pay more increases (r_s = 0.081, p = 0.13), the p-value is not significant. The relationship between income and green place is positively correlated (r_s = 0.081, p = 0.13), the p-value is not significant. The relationship between income and green promotion is positively correlated which indicates as the income increases the consumers are more aware towards green promotion (r_s = 0.015, p = 0.778), whereas the p-value is not significant.

Chapter 3: Green Marketing and Purchase Intention

a) The correlation test between the green marketing mix and the purchase intention of consumers revealed that there is a substantial connection between the independent factors and the dependent variable which is revealed by the two-tail test's results at

0.01 significant levels. The results revealed that green product, green price, green promotion, green place are positively related with green product purchase intention.

b) In case of the effect of green product on green product purchase intention of the consumer, the significant and positive results revealed that green product has a positive impact on green product purchase intention (β= .176, t = 1.971, p = 0.049).
c) Additionally, the study evaluated whether green price has a significant positive impact on green product purchase intention or not. The results implied that green price has a significant and positive impact on green product purchase intention (β = .530, t = 4.345, p < .001).
d) Furthermore, the study also revealed that green place has a significant and positive impact on green product purchase intention (β = .331, t = 2.348, p = 0.019).
e) In case of whether green promotion has a significant positive impact on green product purchase intention or not, the results revealed that green promotion has a significant and positive impact on green product purchase intention (β= .418, t = 3.581, p < .001).
f) The study also further implies that the factor green price (β=.530) and green promotion (β = .418) has utmost significant positive impact on green product purchase intention.
g) Moreover, the findings indicates that green marketing mix significantly impacted green product purchase intention (p<.001) which indicates green marketing mix has significant potential to influence the customer green product purchase intention (β= 0.692, t = 17.979). Moreover, R^2 = 0.478, depicts that the model explains 47.8% of variance in green product purchase intention.

Chapter 4: Green Marketing and Environmental Concern

a) The correlation test between green marketing mix and environmental concern revealed that there is a substantial connection between the independent factors and the dependent variable which is revealed by the two-tail test's results at 0.01 significant levels. The results revealed that green product, green price, green promotion, green place are positively related with environmental concern.
b) From the study it was found that green product has a significant and positive impact on environmental concern of consumers (β= .465, t = 6.104, p <.001), indicating

customer's perception towards green product has a positive impact on their environmental concern.

c) In case of evaluating whether green price has a significant positive impact on environmental concern or not, the results revealed that green price has a significant and positive impact on environmental concern on (β= .519, t = 3.765, p < .001), which means customer's perception towards green price has a positive impact on their environmental concern.

d) The study further evaluated whether green place has a significant positive impact on environmental concern or not. The results revealed that green place has a significant and positive impact on environmental concern (β= .254, t = 2.052, p = 0.041), indicating that customer's perception towards green place has a positive impact on their environmental concern.

e) In case of effect of whether green promotion has a significant positive impact on environmental concern. The results revealed that green promotion has a significant and positive impact on environmental concern (β = .839, t = 6.273, p < .001), which means green marketing campaigns educate the customer more about the environment and customer's perception towards green promotion has a positive impact on their environmental concern.

f) The findings further indicates that green marketing mix significantly impacted environmental concern (p<.001) which indicates green marketing mix has significant potential to influence the customer's environmental concern (β= 0.809, t = 25.782). Moreover, R^2 = 0.653, depicts that the model explains 65.3% of variance in environmental concern.

Chapter 5: Greenwashing Perception and Green Purchase Intention: Environmental Concern as Mediator

a) The results of the study revealed that the Beta value pertaining the relationship of greenwashing perception and green purchase intention turns out to be negative i.e. (β= -0.601, t= 11.23, p <0.001), indicating that the consumers have a negative perception on greenwashing and it leads to negative purchase intention.

b) The study further evaluated whether greenwashing perception has a positive impact on environmental concern. The results revealed that the Beta value pertaining the

relationship of greenwashing perception and environmental concern turns out to be positive i.e. (β= 0.793, t= 32.738, p <0.001), which means that increase in greenwashing perception leads the consumers to be more environmental concern.

c) The results further revealed that the Beta value pertaining the relationship of environmental concern and green purchase intention turns out to be negative i.e. (β= -0.188, t= 3.178, p =0.001), indicating as consumers know more about greenwashing, they tend to doubt the green marketing or green product ultimately resulting in negative purchase intention.

d) A series of regression analysis was carried out to test the hypothesis if there was any mediation effect of environmental concern between greenwashing perception and the green purchase intention of the consumers. The total effect was tested and the results revealed that the greenwashing perception is negatively significant to green purchase intention (β= -0.751, t = 28.753, p <.001). This means consumer behaviour is negatively affected by greenwashing in the presence of environmental concern.

e) The direct effects with the inclusion of a mediating variable which is environmental concern the impact of greenwashing perception (independent variable) on green purchase intention (dependent variable) is significant (β = -0.601, t = 11.230, p <.001), and greenwashing perception impacts negatively on green purchase intention. The perception of greenwashing is inversely correlated with consumers' propensity to purchase green items.

f) The indirect effect of greenwashing perception on green purchase intention in the presence of environmental concern is significant (β = -0.149, t = 3.094, p = 0.001) this reveals that environmental concern partially mediates the relationship between greenwashing perception on green purchase intention which indicates that a portion of the effect of greenwashing perception on green purchase intention is mediated through environmental concern, whereas greenwashing still explains a portion of green purchase intention that is independent of mediator environmental concern. the results implied a partial mediation, and it can be further classified as a complementary partial relation as the direct effect which is greenwashing perception on green purchase intention and the indirect effect which is greenwashing perception on green purchase intention in the presence of mediator environmental concern both are in the same direction which is a negative direction (Baron and Kenny, 1986).

Suggestions

The following recommendations were made based on the researcher's distinct findings, and the examination of both primary and secondary data.

Suggestions to the Marketers:

a) The marketers by using personal selling can actively educate consumers about the advantages of green products. Salesmanship also aids in demonstrating green products to customers and promptly addressing their concerns. In order to target the consumers and strengthen the brand image, businesses might emphasize environmentally friendly packaging in their advertising materials.
b) To raise customer awareness, businesses could organise environmentally friendly initiatives. Other stakeholders, including as workers, suppliers, shareholders, etc., might also be the subject of such programmes. Through the media and ads, consumers are becoming more aware of environmental concerns and climate change. Both new and established firms now have a chance to invest in environmentally friendly goods.
c) When compared to non-green items, green products are often more expensive because of the high cost of the raw ingredients. Companies that produce green goods can identify replacement raw materials with lower costs in order to lower the price of green goods.
d) As the results confirmed that there is a significant impact of green product, green price, green place and green promotion on the purchase intention of the consumers the marketers should focus on all the aspects of green marketing.
e) Simultaneously according to the study's findings, companies who engage in greenwashing will leave a bad image on consumers, which will convert into less purchase intentions through word-of-mouth. Similar to this, customers' environmental awareness will be important when evaluating any company's green promises. Therefore, from two perspectives, the study's findings are significant for marketers. The first perspective involves actually developing programmes, plans, and strategies to save the environment. The second perspective depicts their

environmental initiatives and activities favorably while avoiding hyperbole and fabrication.

f) Customers are considerably more informed and has access to a variety of sources to verify any company's green claims. Based on the findings of the study green marketing perception of consumers has a significant impact on their environmental concerns. So, marketers are more responsible in their part to educate the consumers more towards an increase in the environmental concern of consumers by providing proper eco-labels, providing green certification, informative advertising regarding the environment, providing better product description etc.

g) The growth and development of a corporation is contingent upon the purchasing intentions of its customers. As a result, further steps should be made to ascertain the customers' intended purchases. Knowing this allows a business to adjust its production practices to better serve customers. The company's ultimate objective should be to satisfy its customers. A corporation should alter the components in its goods if it discovers that they are not regarded as green products. Furthermore, the final goal of all business sector activities should be favorably centered around the purchasing intents of customers and environmental concerns.

Suggestion to the Government:

a) There is a lack of policy regarding green products in India and the government should take necessary steps to implement certain policies by setting up specific boards and committees to look after the working of the companies.

b) The government could take action to create rules concerning "going green" by requiring businesses to use green routes of distribution and renewable sources of energy, which would result in cost-effectiveness for the concerned organizations. The movement against consumerism on environmental problems has to be boosted. Employees should take the lead in creating a green workplace and demand that management create green environmental policies for their businesses' immediate surroundings in addition to their places of employment.

c) India is recognized for its herbal goods, thus the government may support MSMEs by providing subsidies for the manufacturing and marketing of herbal products. The Government can impose high taxes to limit the massive entry of synthetic products

by MNCs into the Indian market. Government may use subsidies and tax breaks to support green goods manufacturing.

d) Since the study has confirmed that the perception of consumers towards green marketing mix can influence their green purchase intention positively, that means people are more aware towards the harm caused to the environment and wanted to shift to green products. Government can direct the companies to take this opportunity and initiate proper promotion of the product to guide the customers, make proper pricing policy regarding the price of the green products, make proper distribution and make manufacturing unit near to the market area and lastly to meet the standard manufacturing process and ingredients in the production of green products. The government can penalize a corporation and forbid the use of dangerous raw materials or any goods that have undergone animal testing.

e) As there is an increase in greenwashing activities of the companies, and from the results it has been confirmed that greenwashing perception of consumers affects their purchase intention of green products, and leads to decrease in purchase of green products due to lack of trust. Therefore, the government needs to control such practices which are used to deceive the customer and a checking board needs to be set up, they can sue and ban advertisements for over dubious claims. As 79% of the green promises made in advertising in India are false or inflated, according to different research by the Advertising Standards Council of India (ASCI).

f) The absence of regulations is one of the factors contributing to India's high level of greenwashing. Companies are able to make false or deceptive statements about the environment in India without facing any repercussions since there are no explicit rules that govern such claims. Government should penalize the companies involved in such activities.

g) The government need to encourage researchers who are enthusiastic to look for fresh viewpoints on environmental issues. The goal of the research should be to support green customers and environmental concerns. The primary goal of the study should be to determine how a consumer might avoid the greenwashing tactics used by the business. Environmental non-governmental organizations should also be supported in their efforts to speak out for underprivileged customers. Businesses should conduct

more study to determine how to provide consumers with environmentally friendly products.

h) Government should also take the opportunity to educate the consumers regarding green products and its advantages, as its peak time for people to go green and save the environment. As now it's the digitization era digital media can be used to pass the information and educate the consumers.

Suggestions to the Customers:

a) Many a times consumers fall into greenwashing due to false claims, consumers should always should try to analyze the product and the advertisement properly before making an investment. It is advised that customers carefully consider the complaints made against advertising and their promises to be informed about the offered goods.

b) It can be seen from the findings that demographics of the consumers mostly are not significant to their perception towards green marketing mix, they should educate themselves and try to investigate the advantages and disadvantages of the green products,

c) Going green should be the only motive for everyone in the society, consumers should gain more environmental knowledge so that they can understand the urge to purchase green products that are less harmful to the environment.

d) Customers should always ask about the green attributes of the product while purchasing it. They should always have a clear picture of the harmfulness or advantage of the product while making purchase.

Scope for Future Research:

a) The current study focuses on consumers from Assam itself, further studies can be done by taking more consumers from different geographical area.

b) The study found that the environmental concern of consumers also affects their purchase decision, similarly, there can be various other factors that may influence their purchase intention for green products further studies can contribute to find other factors.

c) A comparative study can be done by taking the rural and urban consumers and analyzing their responses about the green product and greenwashing.
d) In the study only environmental concern has been taken as a mediator between greenwashing perception and purchase intention, there are other mediating factors like demographics, Word-of -Mouth etc. which can be taken into consideration.
e) Only green items in general have been taken into consideration in this investigation. For particular product categories like electronics, cars, food, etc., the outcomes may differ.
f) It is also recommended to conduct research on psychographics and green marketing, since this might help guide segmentation and targeting choices.

Conclusion:

Green marketing delivers a platform for environmentally friendly consumption. It is now crucial for businesses to embrace sustainable development without endangering the environment. The impact of all the 4 P's of green marketing significantly impacts the green product purchase intention and environmental concern of the customers so the businesses need to take care that all the P's are satisfied towards the need of the customer keeping in mind the perception of customer towards it. Along with it the study also confirms that greenwashing perception of the customer have a negative impact on their purchase intention so the companies should avoid such of false claims made to the customer furthermore as environmental concern mediates the relationship between greenwashing perception and purchase intention which indicates that people with more environmental concern keeping in mind the greenwashing factor they will have less tendency to purchase green product due to lack of trust.

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